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INSTITUTO UNIVERSITÁRIO DE LISBOA

Digital Transformation in Chinese Decoration Industry: A Dynamic Capabilities Perspective

ZOU Xiebin

Doctor of Management

Supervisors: PhD Fernando A. F. Ferreira, Full Professor, ISCTE University Institute of Lisbon PhD YIN Jin, Associate Professor, University of Electronic Science and Technology of China

April, 2024

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BUSINESS SCHOOL

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Abstract

The competition in the decoration industry is becoming increasingly fierce, and digital technology is also being developed rapidly. This research studies the digital transformation of decoration firms from the perspective of dynamic capabilities. By conducting case studies on four decoration companies that have undergone digital transformation, it has been proven that dynamic capabilities promote the companies to improve performance and maintain sustained competitive advantages. This study proposes a three-dimensional composition system for the dynamic capabilities of decoration firms, discusses the mechanisms of action in each dimension, and simultaneously explores the role of dynamic capabilities in the relationship between sustainable profitability of firms and the role of path dependence in empirical research. Specifically, the optimal model is selected through model selection, verifying the linear and nonlinear effects of dynamic capabilities of decoration firms, inspirations, shortcomings, and prospects of the research.

Keywords: Decoration enterprises; Digital transformation; Dynamic capability; Enterprise performance **JEL**: M21; L74

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Resumo

A concorrência na indústria da decoração está a tornar-se cada vez mais intensa à medida que a tecnologia digital também se desenvolve rapidamente. O presente estudo analisa a transformação digital das empresas de decoração tendo por base a perspetiva das capacidades dinâmicas. Ao realizar estudos de caso em quatro empresas de decoração que passaram por uma transformação digital, foi possível apurar que as capacidades dinâmicas permitem às empresas melhorar o seu desempenho e manter vantagens competitivas sustentadas. Este estudo propõe um sistema de composição tridimensional para as capacidades dinâmicas das empresas de decoração, discute os mecanismos de ação em cada dimensão e explora, simultaneamente, o papel das capacidades dinâmicas na relação entre a rentabilidade sustentável das empresas e o papel da dependência da via escolhida para a investigação empírica. Especificamente, o melhor modelo é selecionado através da seleção dos modelos estudados, verificando os efeitos lineares e não-lineares das capacidades dinâmicas no desempenho empresarial das empresas de decoração. Este estudo apresenta ainda conclusões, limitações e perspetivas de investigação futura.

Palavras-chave: Capacidades dinâmicas; Desempenho empresarial; Empresas de decoração;Transformação digitalJEL: M21; L74

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摘要

面对装饰市场竞争的日趋激烈和数字技术的快速发展,论文从动态能力的视角研 究装饰企业数字化转型。通过对四家已经数字化转型的装饰企业进行案例研究,证明 了动态能力促进装饰企业提高绩效并保持持续竞争优势。提出装饰企业动态能力的三 维度构成体系,论述了各维度的作用机制,同时在实证研究中并行探讨了动态能力与 企业持续盈利关系中的作用以及路径依赖特性的作用,具体通过模型尝试选择了最优 的模型,验证了装饰企业动态能力与企业绩效的线性和非线性作用。也阐述了研究的 结论、启示、不足和展望。

关键词:装饰企业;数字化转型;动态能力;企业绩效 JEL: M21; L74

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Thanks to all the efforts and help, I was able to complete my research, fulfill my dreams, and accomplish my mission to my extended family.

Several friends once asked me: Why do I need to pursue a doctoral degree? What do you want to do after completing your DoM?

I carry dreams and missions, I answered.

I was born in a mountain village in central Hunan, China, which is far from town. I am the first undergraduate student in the history of the village and the first person in my family to step out of farming. At the end of the last century, my parents did their best to send me to high school and placed infinite expectations on me. However, my path to the college entrance examination was full of obstacles. When the news of being admitted to university arrived, both my father and mother wept for joy. I remembered the morning when I was going to college, my mother held my two-year-old nephew and walked me out of the village. She pointed to my nephew and said: *"Study hard, I will give all I have to support your study. It will be better for their generation as well"*. More than two decades have passed, and I vividly remember the scene and tone. This was a rural mother who suffered from poverty and hardship. She made the truest thought and fully supported me for future generations. During my college years, I was able to complete my studies by earning living expenses through my own efforts. Later, I started

working and pursued a master's degree while starting a business. Although it was difficult, I never forgot my parents' expectations for me to take the lead in changing the fate of my family.

Over the years, I have experienced countless ups and downs. I have achieved some success in my career and greatly changed the fate of my family in terms of economic conditions and vision, I have never changed my original intention. I want to make a breakthrough for the entire family in terms of education and set a spiritual example of continuous effort and improvement.

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曾有好几位朋友问我:为什么要读博士?读完博士想做什么?

我怀揣梦想和使命!

我出生在中国湖南中部大山一座离镇里面都还很远的山村里,是全村历史上第一 位大学本科生,更是家族第一位跨出农门的人。上世纪末,父母尽全力把我送进高 中,寄予了我无限希望,然而我的高考之路充满坎坷,考上大学的消息传来,父亲和 母亲都感动得泪流满面。记得要去上大学的那天早上,母亲抱着两岁的侄儿送我走出 村口时指着侄儿说的一句话"送,送,送,努力把你送出去,对他们这一代人也会好 一点"。二十多年过去了,那场景,那语气,我清晰的记得,这是一位饱受贫寒和历经 苦难的农村母亲为了后代最朴实的战略和全力托举。大学期间,我凭自己的努力赚取 生活费得以完成学业,后来参加工作,再后来一边创业一边读硕士,虽然很艰难,但 是一直没能忘记父母亲对我带头改变家族命运的期盼。

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Chapter 1: Background

1.1 Development background of the interior decoration industry

In recent years, interior decoration industry has developed rapidly along with the general environment, and an important part of the high-speed construction industry development (Xu, 2018). Decoration and renovation project is highly comprehensive, demanding, and multidisciplinary. With the development of technology and the progress of the times, the application of digital technology in decoration and renovation projects has become increasingly important, and it can enhance the level of decoration refinement to achieve higher quality. Traditional decoration methods, raised by S. Tang (2021), have several shortcomings, such as complex construction techniques, long project cycles, and unsatisfactory results. Thus, the digital transformation of traditional decoration business, by using digital technologies such as the Internet, big data and artificial intelligence, comprehensively reshapes strategic planning, business process, organizational structure and business model. This transformation constructs a value creation system, driven by data as the core factor, achieving close correlation and value co-creation with stakeholders, enhancing market competitiveness and growth in innovation.

From 2019 to 2022 which was affected by COVID-19 pandemic, Chinese traditional businesses are implementing digital transformation to improve their digital capabilities in terms of business field, business model, and organizational types. The digital transformation in enterprises is driven by three main factors: changes in the macro environment, intensified market competition, and personalized user demands. The acceleration in updates and iterations in digital technology enables successful digital-transformed business to better adapt to external digital changes and maintain their original market competitive advantages. Digitization has become the core driving force for the transformation and development of traditional business. At present, the development status of traditional business still relies on traditional models for organizational structure and production methods, with low levels of informatization and digitization. Therefore, it is necessary to elevate digital transformation to the level of strategic decision-making, and cooperate with digital transformation strategies in many aspects, such as organizational structure, production model, and management model. Traditional businesses are also transitioning from intelligent production and manufacture to virtualization and networking,

accelerating their digital transformation in various aspects, such as production, sales, design, and research and development. Traditional business that implementing digital transformation strategies and strengthening independent research and innovation in digital technology, will adapt to the impact and changes of information technology on traditional business models, and further establish dynamic capabilities that adapt to the rapid development of the digital economy and industry technological revolution. For traditional business, digital transformation is not an easy task. Establishing systematic digital technologies in this process will have a great impact on traditional strategic decision-making and business models (Qian & He, 2021).

Nowadays, new construction market in urban area for the traditional decoration industry is gradually shrinking, and competition among enterprises is becoming increasingly fierce, that brings price wars affect the profit returns. In addition, the inherent limitations of the decoration industry, such as fragmented industry, lack of industry standards, and vicious competition, have led to the slow development of the traditional decoration industry in China, together with various factors in the L-shaped macroeconomic trend and the government's regulation of the real estate industry. With the continuous development and innovation of new technologies such as artificial intelligence, big data, 5G networks, and cloud computing, the era of intelligence and the new industrial revolution have quietly arrived. J. Zhang (2022) mentioned these changes have made the external environment that companies rely on full of uncertainty, complexity, and ambiguity, brought to the firm's survival and development with unprecedented challenges.

The turbulent external environment is filled with opportunities and threats, which not only increases competition among decoration business, but also brings huge impacts to the survival and development of the companies. The rapid technological change has forced decoration firms to undergo transformation in the turbulent environment, the application of Internet+ technology has become a trend. The rural revitalization and consumer industry, which are vigorously developed by national policies, will be emerging markets for modern decoration. In this context, traditional decoration companies should seize policy support and digital technology to transit their companies into markets with huge development space, such as rural revitalization, specialized industries for enriching the people, and consumer industries. Digital transformation has become a strategic priority on the agenda of senior management. However, there are shortcomings in the theoretical and practical research on the implementation of digital transformation in traditional decoration enterprises, especially in the exploration of how enterprises can successfully carry out digital transformation through the development of dynamic capabilities. Therefore, this research believes that, due to the disruptive nature of digitalization, the dynamic capability theory framework will provide a strong theoretical perspective for studying the digital transformation of traditional decoration industry, and companies should build dynamic capabilities by creating, implementing, and transforming business models in the digital era.

1.2 Macro background

1.2.1 China's economic development has entered a new normal, and the L-shaped economic trend will continue for a period of time in the future.

Economic growth and economic cycle fluctuation have always been two important backgrounds of macroeconomic research. No matter what kind of system and development stage a country is in, economic growth will show a trend of fluctuation. Meanwhile, from 1978 when the reform and opening-up policy was officially implemented to 2020, China's market economy gradually became the dominant and its economy grew rapidly. According to the National Bureau of Statistics, China's average year-on-year GDP growth rate over the past 40 years has reached 9.5%, far exceeding the average growth rate of other countries in the world (The Government of PRC, 2018). However, along with the rapid economic development, there were also high fluctuations in economic developments peaked at 24.1% during the dramatic inflation in the 1980s and 1990s (National Bureau of Statistics [NBS], 2023).

The government and the central bank implemented economic policies according to the characteristics of the fluctuations so as to effectively smooth the economic fluctuations and prevent the economic downturn, and finally realized the "soft landing" of the economy in 1997. Since then, due to part of the negative impact of domestic property reform on the one hand, and the international economic recession on the other hand, China's economy fell into deflation, not revitalized until 2003. Then, in 2008, the U.S. subprime mortgage crisis caused by the financial crisis sweeping the world, China's economic development has slowed and toward a downward trend, while the Chinese government has introduced ten measures to 4 trillion investment plan hopes to expand domestic demand and reduce the pressure on the economy, eventually managed to avoid economic "hard landing" and driving the world economy out of recession, the world has then entered into a post-crisis era.

During the three years from the end of 2008 to 2011, China's GDP grew at an average annual rate of 9.6%, and then the economic growth rate fell below 8% in 2012 (NBS, 2013; Sun & Zhang, 2021). It reflected a significant change to China's economic cycle. The economic growth model has undergone a transformation, forming an L-shaped long tail trend under

medium-to-high speed growth. This trend indicates that the economic growth rate has shifted from high speed to stable slower growth rate, reflected by GDP growth rate from 2005 to 2019. The discussion on the L-shaped trend first appeared in an interview with authoritative figures by the People's Daily in May 2016. The authoritative figure pointed out that the Chinese economy will not show a U-shaped or V-shaped recovery, but will continue to be in an L-shaped growth stage, suggesting that this transformation is a long-term rather than a short-term phenomenon.

In the current complex international environment, China's economic development is facing new challenges and opportunities. Especially the trade dispute between China and the United States, which stems in part from the rapid growth of our country's economy, poses a potential challenge to the global influence of the United States. According to data from the International Monetary Fund (IMF), China's economic size is rapidly approaching that of the United States, and its industrial output value has even surpassed that of the United States (Sun & Zhang, 2021). Faced with the strategic suppression of the United States, the improvement of China's comprehensive national strength and international status is changing the existing balance of international power and the world pattern. Although the COVID-19 has severely hit China's economy, its impact is considered to be temporary and external, which is not enough to change China's strong development potential, economic growth elasticity and long-term trend (Sun & Zhang, 2021). In 2020, China's economy achieved a growth rate of 2.3%, becoming the only major economy in the world to achieve positive growth, demonstrating the strong resilience and vitality of China's economy (NBS, 2021).

For the traditional decoration industry, in the face of continuous changes both internally and externally, it is necessary to establish flexible response strategies and active innovation mechanisms. The innovation of digital technology has become a key direction for industry transformation, aiming to seize market share and maintain competitive advantage by improving production efficiency and driving changes in business models. This research will explore how to enhance firm's environmental adaptability, avoid rigidity and path dependence, and explore to successfully implement digital transformation through flexible perception, acquisition, and reconstruction of internal resources from the perspective of dynamic capabilities. The dynamic capability perspective emphasizes that firms can respond to environmental changes through continuous learning and innovation. For traditional decoration firms, this means constantly exploring new technologies, new business models, and new markets to maintain their vitality and competitiveness. In summary, with the ability to quickly and proactively adapt to changes, traditional decoration firms are able to move forward in digitization and seize opportunities.

1.2.2 Rapid development of digital technology

In recent years, digital technology has been empowering businesses with unpredictable scale and speed for transformation. The new generation of digital technologies such as big data, cloud computing, artificial intelligence, and the Internet of Things are opening the curtain of the fourth industrial revolution – Industry 4.0. It means companies to capture and analyze customers in real time through virtual and real integration, which drives companies for production, service and even business model innovation (Sendler, 2014). This widely and profoundly changes the business environment, business methods, and productivity of traditional decoration industries, becoming a new driving force for promoting high-quality development of decoration firms. More and more decoration firms are gradually realizing that the driving force of traditional production models for growth and development is slowing down, and the constantly emerging intelligent decoration and digital services are changing the competitive landscape of the industry.

In this era of digital economy, digital technology shows great potential. It can promote decoration firms to make comprehensive changes in value proposition, production process, value realization and organizational structure, and also realize the interconnection between people, data, machines and the environment through quantitative decision-making, digital design, R&D and manufacturing supported by big data, as well as the industrial Internet. The application scope of intelligent decoration technology is becoming wider and wider, Showcasing strong development potential (Chen, 2021). The rapid development of digital technology is profoundly changing the process of value creation, driving the transformation of value creation towards digitization, networking, and intelligence. This transformation not only promotes innovation in business models, but also nurtures new advantages in enterprise competition. In the current business environment, digital transformation and service-oriented transformation are seen as key driving forces for driving business model innovation. The interaction between the two promotes the continuous evolution and maturity of digital business models. Specifically, the widespread use of digital technology is reshaping the operational models of the decoration industry and multiple other industries, opening up new paths for enterprises to innovate their value propositions and value creation processes. Empirical research on a global scale further confirms this viewpoint.

According to an analysis of over 16,000 global companies by the World Economic Forum in 2018, a large number of companies have achieved positive returns on investment in emerging digital technologies over the past decade, with significant improvements in production efficiency, reaching three times the previous level (World Economic Forum, 2018). In addition,

McKinsey's research also suggests that companies with well-defined digital transformation strategies have a probability of exceeding their expected profits by more than 50%, which is more than five times higher than companies that have not implemented any digital measures (Bughin et al., 2019). These two studies jointly emphasize the importance of adopting and implementing digital transformation strategies in today's digital age, and clearly demonstrate that through digital and service-oriented transformation, companies can not only innovate their business models, but also significantly enhance their competitiveness and profitability.

At present, the business model empowered by digital technology is gradually becoming the key for enterprises to establish competitive advantages. This includes optimizing existing business models to better meet market demand, expanding business models to open up new revenue channels and build differentiated competitive advantages, as well as driving the transformation of business models to bring new impetus to the redevelopment and transformation of enterprises. This is mainly reflected in three aspects: firstly, optimizing the value creation process through process optimization, data-driven decision-making, and digital innovation to increase efficiency, accuracy, and innovation; Secondly, introducing a large number of IoT and smart devices can help improve the quality of production. Chen (2021) proposed that by utilizing data mining, business intelligence, and visualization tools, managers can gain a more comprehensive perspective on information, thereby expanding their knowledge scope and enhancing their foresight and insight into future development. By applying big data analysis, virtual simulation, and digital twin technology, technical personnel can effectively discover requirements, optimize products, and quickly deliver product value at lower costs during the product development, design, and adjustment stages.

The digitalization and intelligence of production systems significantly enhance the adaptability and flexibility of enterprises. This includes transitioning to a digital business model based on a "product service system", transitioning from a single product sales model. The promotion of Internet of Things technology is not only to promote the digitization of organizational structure and optimization of customer relationship management, but also to bring innovation in the field of products and services, supporting enterprises to develop new services and business models based on "product service systems". The application of digital technology can reshape the market positioning of decoration firms, expanding their business scope from simple indoor decoration to digital exhibitions and human-computer interaction services. Digital technology is widely used in various industrial products, such as wearable devices, home appliances, and cars, which typically integrate intelligent control systems, intelligent services, and customer interaction channels, provided through mobile applications

or user-friendly human-machine interfaces. Customers can use these applications or interfaces to control their devices and enjoy convenient digital services; For example, in current smart homes and home appliances, users can use the app to control the entire home appliance system.

The transformation of business models is the shift towards developing digital businesses. Bryde et al. (2013) mentioned building Information Modeling (BIM) technology, which promotes the enhancement of digital capabilities in the decoration industry, as an innovative architectural design, construction, and management method, provides an open platform for information exchange and knowledge sharing throughout the entire lifecycle of construction projects, promoting changes in the work and communication modes of decoration enterprises.

BIM is gradually triggering significant changes in the construction industry. BIM software integrates 3D modeling, virtual simulation display, collision inspection, and material statistics for interior decoration and renovation, greatly improving work efficiency and ensuring the possibility of construction to the greatest extent possible (Yao, 2019). By using BIM models to optimize the design of components, equipment, and pipelines. During the construction process through collision inspection and simulation, problems and contradictions that will be faced in the future can be identified as early as possible before construction. Unreasonable areas during construction can be identified and adjusted in a timely manner, or the best construction plan and solution can be discussed to reduce the occurrence of errors, omissions, collisions, and deficiencies in traditional modes, improve construction efficiency and quality, and shorten the construction period. Applying BIM software for indoor decoration and renovation, in the early bidding process, the application of BIM database can more accurately calculate the engineering quantity, budget the engineering cost, and thus reduce costs. In the early stage of construction, the application of BIM technology can greatly reduce the workload in terms of drawing correction, and the feasibility of construction can also be judged by simulating the real construction process. In terms of showcasing the decoration and renovation effects to homeowners, the application of BIM technology and 3D animation rendering can provide a realistic visual impact and increase the likelihood of winning the project. In construction, the application of BIM technology for virtual construction of decoration and renovation projects can achieve the activity of simulating first and then building. The project construction plan can be simulated, analyzed, and optimized to identify key and difficult points in the construction process, optimize the construction plan, reduce conflicts, rework, and other situations, assist construction, and avoid project delays (S. Zhang & L. Yan, 2019). For example, using BIM software can accurately arrange and route water pipes, wires, avoid cross collisions, and reduce rework.

In the era of digital economy, digital transformation has become an important strategic proposition that the decoration industry must face, but most enterprises are still in the early stage of digital transformation (Zhao, 2020). On March 12, 2021, the *14th Five Year Plan for National Economic and Social Development of the People's Republic of China and the Long Range Objectives for 2035* were officially released. This is the first time that the country has made a systematic layout of digital development in the form of a special article, proposing to embrace the digital age and drive the transformation of production, lifestyle, and governance through digital transformation as a whole (Deng, 2022). Decoration firms should actively seize the opportunities of digital development, follow the trend, move according to the situation, and plan according to the situation, and solidly promote digital transformation (Deng, 2022).

1.3 Related industry background

1.3.1 The real estate development slowed down and was subject to continuous macropolicy regulation

Since the comprehensive marketization of real estate in China in 1998, with the release of the huge demand of urban residents, China's real estate has experienced a period of rapid development for 30 years. Its development is based on demand. According to the different needs of urban residents at different stages, the real estate can be divided into different stages: The first stage is the rapid development stage of real estate from 1998 to 2009, in which the demand for real estate market accumulated for many years before the full marketization was concentrated and released. The demand for real estate market was strong and the price kept rising. During this period, people's main demand for real estate is rigid and improved demand, so the development of real estate is in the stage of large-scale expansion. Real estate developers mainly build new residential areas to meet people's demand for large housing space and new communities. The second stage is the stage of suppressing speculative demand for investment from 2010 to now. After the concentrated release of rigid and improving demand in the early stage, the state has issued a series of macro-control policies for real estate intensively and continuously to restrain the excessively high and rapid development of housing price caused by speculative demand for investment (Yang & Zou, 2021).

The growth rate of investment in real estate development in China from 1998 to 2020 showed a clear two-stage change. The first stage was from 1998 to 2014, with an average annual growth rate of 22.7%; The second stage is from 2015 to 2020, with an average annual

investment growth rate of only 8.1%. The growth rate of real estate investment has experienced a cliff like decline since 2015. The average annual growth rate of sales area in China from 1998 to 2020 was 12.9%. The growth rate of sales area shows two distinct two-stage characteristics. The first stage was a high-speed growth period from 1998 to 2009, with an average annual growth rate of 20.5%. The second stage is a period of high and low fluctuations from 2010 to 2020, with an average annual growth rate of only 5.3% for sales area. The fluctuations are significant, with the highest growth rate being 22.5% in 2016 and the lowest growth rate being -7.6% in 2014 (Yang & Zou, 2021).

In addition, there is a serious phenomenon of product homogenization and intense price competition in the real estate market, which puts pressure on the profit margins of enterprises. As the market tends towards high-end, product competition becomes increasingly fierce, and price wars occur frequently, posing a challenge to the profitability of enterprises. At the same time, influenced by the purchase restriction policies and interest rate hikes in the real estate market, consumers have become more cautious when purchasing houses, which has further had a significant impact on the demand for real estate.

1.3.2 The rise of consumer industries brings new opportunities

According to the latest data released by the National Bureau of Statistics, a detailed calculation was conducted on the new driving forces of China's economic development from 2015 to 2020. This data reveals the rapid growth trend of the Chinese economy during this period, with the New Kinetic Index increasing from 119.6 in 2015 to 440.3 in 2020, with an average annual growth rate of 19.6%, 22.8%, 30.2%, 34.9%, 26.2%, and 35.3%, respectively (China Information News, 2021). Especially in 2020, in the face of the severe challenge of the COVID-19, the new economic momentum with new industries, new formats and new models as the core has not been suppressed but has achieved counter trend growth. This phenomenon, as observed by H. Lyu (2021), highlights the strong resilience and vitality of the Chinese economy, providing strong support for high-quality economic development.

In 2021, the Chinese consumer market has shown a strong recovery momentum, with a year-on-year growth of 16.4% in the total retail sales of consumer goods in the first three quarters of the year. Compared with the same period in 2019, the growth rate has increased by 8.0%, and the two-year average growth rate calculated using the geometric average method is 3.9%. Thanks to the advancement of network information technology, continuous optimization of network infrastructure, and rapid deployment of 5G networks and the Internet of Things, new consumption models such as online office, remote medical consultations, and contactless

delivery have rapidly emerged and been widely adopted. At the same time, traditional offline enterprises are also transforming and upgrading, expanding their online business to meet new consumer trends. It is reported that in 2020, China's e-commerce transaction volume reached 37.2 trillion yuan, with an annual growth rate of 4.5%. The emerging consumer demand has stimulated the rapid growth of online consumption.

In terms of new kinetic energy of China's economic development, NBS (2021) announced the economic vitality index was 324.1 in 2020, an increase of 17.4 percent over the previous year. The number of newly registered market entities in China has reached 25.02 million, an increase of 1.246 million from 2019, with a growth rate of 5.2%. On average, 22000 new enterprises are established every day. By the end of the year, the total number of market entities had reached 140 million, reflecting the positive recovery trend of the Chinese economy. Despite the impact of the epidemic, the actual use of foreign investment in China in 2020 still reached 144.37 billion US dollars, a year-on-year increase of 4.5%. Among them, high-tech industries attracted 42.8 billion US dollars in foreign investment, an increase of 9.5%, demonstrating the high recognition of China's economic development potential in the international market. The rapid development of express logistics services is also an important manifestation of China's economic vitality. In 2020, the total volume of express delivery business surged to 83.36 billion items, a year-on-year increase of 31.2%, more than six times that of 2014. China will undoubtedly continue to be one of the largest and most dynamic consumer markets on a global scale.

With the rise of the consumer industry and the gradual improvement of digital technology, people are also liberated from simple material life, pursuing a rich and colorful spiritual life, and eager to obtain a better product experience. Previously, products and consumers used one-way communication, such as television, traditional museums, traditional media, and shopping malls. But now consumers prefer interactive experiences. Such as digital museums, digital exhibition halls, digital parks, and digital malls, consumers interact with products, providing convenience and further obtaining more vivid, interesting, and enjoyable immersive experiences. This fundamental consumer transformation has also promoted the rapid development of digital construction in county towns and rural areas, making digital construction a new field in the decoration industry.

1.3.3 The current situation of decoration industry and the urgency of industry transformation

After the reform and opening up, China's construction industry has maintained rapid

development and significantly expanded its scale. With the rapid growth of China's economy and accelerated urbanization process, China's real estate and construction industry has sustained growth and the building decoration industry has shown great potential for development. In recent years, as the development of real estate and construction industry slows down, the development of decoration industry also slows down, even negative growth. Although the architectural decoration industry has a broad market space, the entry threshold is relatively low. According to the 2020 China Statistical Data Yearbook, there are 103,800 architectural decoration enterprises in the industry at the end of 2020. The market competition is fierce and the concentration is low, presenting a situation of "large industry, small enterprise".

In China's construction and decoration industry, the linear functional system is the main structural form of enterprise management (You et al., 2021). This management model focuses on the management and operation of functional departments, leading to the expansion of the internal organizational structure of the enterprise, as well as the interweaving and delay of work processes. Specifically, due to the clear boundaries between functional departments but insufficient synergy, many repetitive and unnecessary processes have been created, resulting in a lack of efficiency and flexibility in handling business for the entire organization. This management mechanism is difficult to support enterprises to respond quickly and accurately to market changes. When market demand changes, enterprises often fail to adjust their strategies and operations in a timely manner due to inefficient internal decision-making and execution processes, resulting in slow and inaccurate market responses.

In addition, although the division of labor is clear, the collaboration mechanism is not sound, making it difficult for functional departments to achieve effective communication and cooperation, further exacerbating the insensitivity of enterprises to external changes and the discontinuity in problem-solving. Therefore, for domestic construction and decoration enterprises, in order to improve market competitiveness and adaptability, it is necessary to deeply reflect on and actively reform the existing management mode, such as optimizing organizational structure, simplifying workflow, strengthening coordination and cooperation between departments, in order to better respond to market demand and achieve fast and accurate market response. From the perspective of business development, there is a lack of industrialization and intelligence in the business of decoration enterprises, and information and digital technologies have not achieved deep integration with the business. There is a lack of innovation in product services and business models through information and digital technologies. With the L-shaped trend and transformation and upgrading of China's macroeconomy, traditional models are no longer able to meet the needs of industry development

(You et al., 2021). Enterprises urgently need to move from the traditional red sea market of the decoration industry to the emerging market vigorously developed by national policies, integrate industry resources with digital technology, improve remote efficiency, and explore corresponding markets through communication and interaction. Faced with the opportunity of the country's efforts to promote the deep integration of the Internet and the real economy, decoration enterprises, as one of the industry's main bodies, urgently need to achieve management quality and efficiency improvement and business model innovation through digital transformation, provide customers with better value services to improve the competitiveness of enterprises, and break through the development bottleneck to promote the transformation and upgrading of the industry.

From the perspective of the decoration industry market, the market for newly built home decoration and public decoration projects in cities has decreased, while the demand for renovation and renovation in the existing urban market is limited, resulting in fierce competition in the original market. Under the background of the country's vigorous development of rural revitalization and county-level economic strategy, the development of basic building construction, chain economy, and characteristic industries for enriching the people in counties and villages will become a broad new market for the decoration industry. It will be possible for decoration enterprises to transform into these new markets by combining digital technology. With the development of digital technology, county digital exhibition halls will become a new market for decoration enterprises. In the early years, when visiting exhibitions, I usually looked at display boards, pictures, and took some promotional materials. Nowadays, 3D projection and artificial intelligence can be seen everywhere in the exhibition hall, and digital applications in the exhibition hall have become very common (W. Lyu, 2010). Based on the digitalization of exhibits and exhibition spaces, digital exhibitions build an Internet interconnected network system, realize the comprehensive utilization of information sharing, content co construction and experience sharing between different exhibits and visitors, and achieve the combination between physical exhibitions and virtual exhibitions (W. Lyu, 2010). Digital exhibitions showcase regional history, culture, and promote local customs and traditions with a sense of immersion and a more easily accepted and understandable way for the public. The digital exhibition decoration market not only has a broad market, but also conforms to the basic development strategy of national county-level economy and rural revitalization.

1.4 Proposing research question

In the past decade, IT technologies such as cloud computing, big data, and artificial intelligence have developed rapidly in China. The new concepts and business models brought about by digitalization have accelerated the process of digital transformation in traditional industries (You et al., 2021). Technological innovation has quietly become the driving force for the development of the construction and decoration industry. In the current decoration industry, many leading enterprises are actively exploring and investing in the wave of digital transformation. This trend not only demonstrates the importance that enterprises attach to innovative development, but also promotes the entire decoration industry to move towards a more efficient and intelligent direction. These enterprises optimize and reconstruct the management and operational processes of various links in the industry chain, from market planning, design and construction to delivery and operation, by introducing and applying advanced digital technologies such as big data, cloud computing, and artificial intelligence. Traditional decoration enterprises in our country are facing a fiercely competitive and increasingly uncertain market environment. To maintain their competitive advantage, it is necessary to cultivate internal dynamic capabilities, break through internal rigid path dependence, and promote the transformation and upgrading of the enterprise itself (Mu, 2017).

In the construction of decoration engineering projects, due to the wide coverage of the project, a large amount of data is generated during the process, and management tasks involve multiple aspects, including project management, human resources, finance, labor, and materials. These factors have increased the difficulty of management. With the intersection and integration of business forms, data integration and analysis have become more difficult. Therefore, transforming these data into big data that can be used to support high-level decision-making has become an important task. In this context, the main challenge currently faced by enterprises is how to utilize dynamic capabilities to promote digital transformation, thereby comprehensively improving efficiency, efficiency, and industrial models.

In the context of China's architectural decoration industry, will digital transformation help decoration companies find new markets, create new models, achieve better performance and build moats in the highly competitive Chinese market? If so, how can digital transformation add value to decoration companies?

This study aims to answer these questions with a case study in a dynamic capability framework, which is a common approach to analyzing digital transformation in the existing literature.

1.5 Research significance

The development process of China's decoration industry has been significantly influenced by national macroeconomic policies and economic development, and can be roughly summarized into the following main stages.

Preliminary creation stage: This stage is mainly in the early stage of reform and opening up, when the country began to relax restrictions on the economy and private enterprises, allowing and encouraging private capital to enter the decoration industry, laying the foundation for the development of the decoration industry.

Twisted and chaotic stage: During this period, with the continuous deepening of the market economy system, the decoration industry faced many challenges and problems while developing rapidly, such as disorderly market competition and incomplete industry standards.

Reconstruction acceleration stage: With the support and guidance of relevant national policies, the decoration industry has begun to focus on improving industry standards, strengthening industry management, improving service quality and technological level, and the industry has begun to develop rapidly.

Transformation and upgrading stage: With the increasing diversification and enhancement of consumer demand, as well as the enhancement of green environmental awareness, the decoration industry has shifted from simple decoration construction to providing more comprehensive design and construction integrated services, focusing on project innovation and environmental protection.

Technological innovation stage: Since entering the 21st century, with the development of information technology, the decoration industry has begun to integrate new technologies, such as virtual reality and intelligent systems, promoting the development of the industry towards intelligence and digitization, greatly improving design efficiency and construction accuracy, thereby promoting the industry's further upgrading and value enhancement.

These stages demonstrate the development characteristics and trends of the Chinese decoration industry in different historical periods, reflecting the gradual maturity and progress of the industry in responding to external environmental changes and internal demand adjustments. These stages demonstrate the development characteristics and trends of the Chinese decoration industry in different historical periods, reflecting the gradual maturity and progress of the industry in responding to external environmental changes and internal demand adjustments. Observing the development history of China's decoration industry, it can be seen that its growth trajectory is closely related to the country's macro policies and economic growth.
In the growth process of decoration enterprises, they have always been adjusting and expanding their capabilities in order to keep pace with the constantly changing market. The development paths of these enterprises have also evolved with the evolution of market demand. They adapt to changes in the external environment and maintain their competitiveness by improving management efficiency, technological capabilities, and innovation capabilities.

In recent years, many domestic and foreign researchers have conducted in-depth research to explore how decoration enterprises can build their competitive advantages, among which Porter's (1990) "diamond model", SWOT analysis and other theoretical frameworks and analytical methods have been widely applied. This study aims to provide a clearer understanding of the root causes of competitive advantages for decoration enterprises in a constantly changing environment through a review of digital transformation and dynamic capability theory. In addition, this study aims to reveal the interaction and correlation between corporate performance, dynamic capabilities, and competitive advantages, providing theoretical support and practical guidance for the sustained growth and market competitiveness of decoration enterprises. It also provides support for decoration enterprises to achieve digital transformation and sustained competitive advantages in complex and changing competitive environments, and establishes a theoretical analysis framework suitable for the transformation and upgrading strategy of the decoration industry. These directions will make this study more closely related to practical problems, and thus it has positive significance.

The study aims to provide a very detailed survey of several Chinese decoration companies to fill this gap. Due to intense competition in Chinese decoration market, it provides an appropriate environment to demonstrate how digital transformation can enhance a company's survival ability and seize opportunities to surpass peer companies in a competitive environment.

1.6 Research content and structure arrangement

The next chapters are organized as follows. Chapter 2 summarizes research results and theoretical content about digital transformation, dynamic capability and their combination. Chapter 3 introduces research method, sample and data collection process. Chapter 4 conducts case studies, including single and multi-case studies, discussing the results and outcomes. Chapter 5 discusses research findings, conclusions, and recommendations for further research.

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Chapter 2: Literature Review

2.1 Digital transformation

Digital transformation is a hot topic in today's business world, and with the rapid development of technology, it has had a profound impact on the business model of enterprises. Digital transformation is also known as digitalization. The two terms are often used interchangeably in academic research. This research provides a systematic literature review to gain a more comprehensive understanding of how digital transformation can increase the value of a company. A systematic literature review is different from traditional reviews because it provides an overview of all the most relevant articles and identifies their research objects, methods, and findings. Therefore, a systematic literature review can limit the bias in article selection in general literature reviews (Needleman, 2002). Because digital transformation may vary for different companies, it is difficult to determine a definition that applies to all companies. Many authors attempt to provide a formal and general definition.

The definition by Stolterman and Fors (2004) emphasizes the changes brought about by the application of digital technology in various aspects of life, indicating the wide range of areas covered by digital transformation. Their views reveal the core idea of how digital technology can reshape business models. The definition by D. Y. Liu et al. (2011) focuses on the integration of digital technology in business processes, emphasizing the importance of integrating technology into daily business operations. This integration not only improves efficiency and effectiveness, but also creates new growth opportunities for enterprises. Bharadwaj et al. (2013), from the perspective of organizational strategy, focus on utilizing digital resources to create differentiated value. This definition reflects that digital technology is not just an improvement of a tool or process, but can serve as a strategic resource to seek competitive advantage through its unique applications. Fitzgerald et al. (2014) focused on utilizing digital technology to achieve significant business improvements. This viewpoint emphasizes that the goal of digital transformation is not simply to adopt new technologies, but to achieve fundamental business transformation through technological innovation. Lucas Jr et al. (2013) pointed out that digital technology has not only changed the way businesses operate, but also redefined their business capabilities. By utilizing new technologies such as cloud computing, big data analysis, and

artificial intelligence, enterprises have improved the speed and accuracy of their decisionmaking, and enhanced their adaptability to the market.

The study by Westerman et al. (2014) revealed how companies can leverage technology to achieve significant performance improvements. By digitizing their products and services, enterprises not only expand their coverage, but also improve production efficiency and customer satisfaction. Chanias and Hess (2016) and Henriette et al. (2015) emphasized how businesses can adapt to this change through innovative business models in the context of the widespread application of digital technology. This includes new methods of interacting with customers through digital channels, as well as digitalization of products and services. Schuchmann and Seufert (2015) explored how digital technology enables businesses to more effectively attract customers at every touchpoint of the customer experience lifecycle. This requires companies to continuously utilize emerging technologies such as virtual reality and augmented reality to provide immersive and personalized customer experiences. Multiple studies, such as Chanias (2017), have demonstrated the importance of advanced IT technologies, including analytics and big data, for enterprises to achieve strategic business improvement. This data-driven decision-making enables enterprises to take action based on real-time information, thereby maintaining a competitive edge. Enterprises need to have a clear digital strategy to lead their transformation process. This includes the adoption of new technologies, redesign of business processes, and adjustments to corporate culture and organizational structure.

Parida et al. (2019) found that digital transformation is not a one-time project, but a continuous process. Enterprises need to maintain innovation and adaptability in a constantly changing technological environment in order to discover and leverage new opportunities. Hausberg et al. (2018) explored how businesses can leverage emerging digital technologies to achieve significant business improvements. These technologies include social media, mobile media, analytics devices, and embedded devices, which play a key role in improving customer experience, streamlining operational processes, and innovating business models. The researches from Morakanyan et al. (2017) and Paavola et al. (2017) focused on how digital technology promotes innovation and transformation of business models. Here is a brief overview of the central ideas behind these two studies: Morakanyan et al. (2017) focused on how digital capabilities promote the evolution of business models, operational processes, and customer experiences to create new value added. The author proposes that by utilizing advanced digital technologies such as data analysis, artificial intelligence (AI), and cloud computing, enterprises can explore new market opportunities, optimize existing operational processes, and provide more personalized and satisfactory customer experiences. This transformation not only

involves technological changes, but also requires corresponding adjustments to organizational culture and strategic goals. Paavola et al. (2017) focused on achieving significant improvements in operations and the market through the adoption of new digital technologies. This includes utilizing technology to enhance customer experience, streamline operational processes, or create new business models. For example, improving product tracking and quality control through the application of Internet of Things (IoT) technology, or using blockchain technology to enhance supply chain transparency and efficiency. Paavola et al. (2017) emphasize that companies need to constantly explore and adapt to new technologies to ensure a leading position in a fiercely competitive market environment.

The above definition reveals the multidimensional nature of digital transformation from different perspectives. Whether it is through changing business models, integrating into business processes, executing organizational strategies, or achieving significant business improvements, the core lies in how to effectively utilize digital technology to drive the long-term development and competitive advantage of enterprises. These studies emphasize the profound impact of digital technology on traditional business models, operational processes, customer experience, and organizational structure. Highlighting the fundamental changes that digital transformation brings to enterprise strategy, operations, and customer interaction. In the era of digital economy, in order for enterprises to maintain competitiveness, they must keep up with the pace of technological development, constantly innovate and optimize themselves. With the continuous progress of technology and changes in market demand, digital transformation will continue to evolve, providing new opportunities and challenges for enterprises.

The database for the literature review is Web of Science Core Collection. The first criterion of literature search is that the articles should be closely relevant with digital transformation. Therefore, the chosen keywords are "digital transformation", "digitalization in decoration enterprises" and "digitalization" and the selected articles should contain at least one of these keywords in the titles. Second, the selected timespan is 2000 to 2020 to capture a clear and long-term trend of publications. Third, only journal articles are included in the review to ensure the quality of publications, which means working paper, conference papers are excluded. Fourth, because some articles discuss about the technical details in applying certain digital technologies, rather than the economic impact of digital transformation, the research area of the systematic literature review is set as business economics. Furthermore, publications in languages other than English are excluded from the search result. Finally, 191 articles in the database are selected for analysis after these filtering steps.



Figure 2.1 Distribution of publications

Source: Web of Science Core Collection

Figure 2.1 shows the number of publications in each year during 2000-2020. The first article discussing about digital transformation were published in 2002. Because there was only one publication in 2002, 2003, 2004 and 2006 each, the figure displays the statistics from 2010 to 2020. It is clear that the number of publications and the total citations about digital transformation has been increasing rapidly since 2018. It is evident that the number and total citation of publications on digital transformation have been rapidly increasing since 2018. In other words, digital transformation is attracting the attention of scholars in the field of business economics.

The rapid growth trend of digital transformation publications indicates that it is still an emerging research topic. Digital transformation is a key driving force for change in various fields around the world today, involving the comprehensive upgrading and innovation of traditional industries and enterprises through digital technology. As can be seen from the previous text, the current definition of digital transformation is widely dispersed and differentiated.

Gebayew et al. (2018) and Roth (2016) believe that digital transformation can be understood from three aspects: technology, organization, and society.

In terms of technology: technology is one of the core factors driving digital transformation. Network Physical Production Systems (CPPS), Internet of Things (IoT), and cloud computing are key technologies in the digital transformation process. CPPS integrates software, hardware, sensors, and actuators to achieve human-computer interaction while significantly improving production efficiency and flexibility. The Internet of Things (IoT) connects a large number of physical devices to the Internet, realizing real-time data collection and sharing, and providing support for intelligent decision-making and optimized operations. Cloud computing provides data storage, processing, and analysis services, greatly reducing infrastructure investment and operational costs for enterprises, accelerating the pace of innovation and deployment.

In terms of organization: digital transformation requires changes in organizational structure and management models. This is not only an upgrade in technology, but also a fundamental change in organizational culture and operational models. Organizations need to embrace agility, promote cross departmental collaboration, and respond quickly to market changes and customer needs. In addition, digital strategy should be incorporated into the overall strategic planning of the company, ensuring synchronous development at all levels and effective allocation of resources.

In terms of social aspect: digital transformation has a profound impact on society. It not only changes people's way of life, such as online shopping, smart homes, remote work, but also has a significant impact on the structure of the labor market, creating new job opportunities, and bringing challenges to traditional employment. In addition, the popularization of digital technology has accelerated the flow of information and promoted the process of globalization, but it has also brought about issues of data security and privacy protection.

Digital transformation is a multidimensional process that requires the coordination and promotion of technology, organization, and society. With the continuous development and application of new technologies, digital transformation will continue to deepen and have a more profound impact on the economy, society, and culture.

In the field of digital transformation, with the rapid development of technology, organizations and industries are undergoing unprecedented changes. According to Bharadwaj et al. (2013), the phenomenon of digital transformation has sparked widespread interdisciplinary interest. This transformation not only affects how enterprises apply digital technology, but also redefines core elements such as business models, operational processes, and customer experience. Berman (2012) emphasizes that the key to leveraging digital transformation lies in creating new business models, improving operational efficiency, and enhancing customer experience. By integrating digital technology into their business models, enterprises can achieve significant improvements in resource utilization optimization, cost reduction, employee productivity and efficiency improvement, supply chain optimization, and customer loyalty and satisfaction (Loebbecke & Picot, 2015). However, as digital transformation is a means to achieve goals rather than an end in itself, how to benefit from it remains a focus of industry and academic attention (Parida et al., 2019). In this context,

Bharadwaj et al. (2013) proposed that the digital age is a time for organizations to reconsider the role of IT strategy, no longer just traditional functional strategies as auxiliary tools, but a need to deeply integrate technology and business strategies, transforming them into comprehensive strategies that can drive comprehensive organizational progress. Along with it come challenges and opportunities in various aspects such as organizational culture, leadership style, and employee skills. On this basis, research by Kane et al (2015) has shown successful digital transformation not only involves the selection and application of technology, but also requires clear strategic planning, adaptive organizational structure, forward-looking leadership, and a corporate culture dedicated to continuous learning and innovation. This indicates that on the path towards digitalization, organizations must comprehensively consider and deeply integrate internal and external resources to achieve true transformation and innovation.

Digital transformation has become a key direction for enterprise strategic development. According to Parida et al. (2019), digital transformation is not only about technological updates and upgrades, but also a process of innovating business models through the use of digital technology. This process can not only help businesses open up new sources of income, but also create new value opportunities in the market.

Based on the previous viewpoint, this research proposes that digital transformation is the use of digital technology to innovate business models and provide new revenue streams and value generation opportunities under the influence of dynamic capabilities. Dynamic capabilities play a core role in the process of digital transformation. Dynamic capability refers to the ability of enterprises to adjust and restructure resource allocation in the face of rapidly changing market environments. Specifically, in terms of digital transformation, this means that enterprises need to constantly learn and adapt to new digital technologies, use these technologies to optimize existing business processes, products, and services, and even develop new business models. Successful digital transformation can bring multiple benefits. Firstly, it can help businesses improve efficiency and reduce operating costs. By using digital technology to automate business processes and improve the accuracy and efficiency of data processing, enterprises can operate more streamlined and efficiently. Secondly, digital transformation can also help improve customer experience. By analyzing a large amount of user data, enterprises can gain a deeper understanding of customer needs and provide more personalized and highquality services. Finally, digital transformation can also open up new business models and sources of revenue. For example, through data mining and analysis, enterprises can discover new market opportunities or present products and services to customers in a brand-new way through digital platforms. Digital transformation is a process of comprehensively reshaping an enterprise's business model and value chain. It requires enterprises to have a forward-looking perspective and the ability to flexibly adjust, continuously explore and apply emerging digital technologies, meet market demands in innovative ways, and maintain a leading position in a fiercely competitive market environment.

2.2 Digital transformation in decoration firms

As a pillar industry of China's national economy, the decoration industry is facing unprecedented challenges. The traditional management model of decoration enterprises can no longer meet the needs, and both national policies and market environment have put forward higher requirements for decoration enterprises. From statistical data, it can be seen that the production and operation scale of China's decoration industry enterprises are still expanding, and the total output value of the decoration industry is also continuously increasing. The position of the pillar industry of the national economy is still stable, but the growth rate of the total profit of decoration industry enterprises continues to slow down, and the profit margin of industry output value has been declining for five consecutive years. In 2021, the profit margin of the decoration industry's output value was 2.92%, falling below 3%, the lowest in nearly 10 years. The problems of high consumption, high risk, high investment, and low profit are becoming increasingly prominent. This extensive development model is no longer sustainable and does not meet the requirements of the new development concept of innovation, green, and low-carbon. So, the digital transformation of decoration enterprises is not a multiple-choice question, but a must answer question. It is urgent for decoration enterprises to adapt to the times, establish the strategic position of digital decoration, increase the efforts of digital transformation, drive business with data, achieve optimization and innovation of business models, enter the fast lane of digitization, walk out a path of integrated and innovative development, and empower enterprises to develop high-quality.

Through literature search, the selected keywords are "digital transformation of decoration enterprises", "decoration business", and "digitalization of interior decoration". The title of the selected article includes at least one of these keywords.

Although discussions about digital transformation are widespread in academia and industry, when it comes to the field of architectural decoration, we find that there are very few related research results, especially a lack of systematic and comprehensive analysis of specific cases. In response to this gap, we have compiled several studies for reference and discussion. As Bao's (2004) research focuses on the competitiveness of private construction and decoration

enterprises in western China. Through in-depth analysis, a comprehensive model has been proposed to enhance the competitiveness of these enterprises. This model suggests that by improving the external legal and market environment in which the enterprise operates, improving the financing system, and expanding financing channels, measures such as building a diversified property rights structure, implementing institutionalized management, increasing technological innovation, and strengthening corporate culture construction should be taken within the enterprise. These suggestions aim to enhance the core competitiveness of private construction and decoration enterprises in the western region, thereby promoting their sustainable development and growth. Y. Wang and X. Geng (2016) delved into several key issues faced by China's construction and decoration industry, including the strengthening of demand for construction and decoration technology, the standardization of market order, and the serious pollution caused by decoration waste to the urban environment. They not only analyzed the prospects of the industry and the significant characteristics of the market, but also pointed out its development potential.

Based on these observations, three main recommendations are proposed to accelerate the development of the industry, namely improving the cultural and artistic level of architectural decoration projects, establishing and strengthening brand advantages, and enhancing awareness of resource conservation and striving to create energy-saving architectural decoration projects. In addition, other studies have focused on exploring the characteristics and development trends of the decoration industry, providing more insights and suggestions for the future prospects and strategic planning of the entire industry. These suggestions not only address the technical and management challenges within the industry, but also take into account the responsibility of social and environmental protection, aiming to promote the sustainable development of the construction and decoration industry and achieve a win-win situation of economic benefits and environmental protection.

Hou (2022) has introduced prefabricated buildings into the implementation system of modern architecture, injecting new concepts such as energy conservation, low-carbon, digitalization, and informatization into the innovation of architectural design schemes, assisting in the diversification, miniaturization, and efficient and environmentally friendly implementation of modern architectural design. This can provide new technological support for the high-quality development of the modern architectural industry.

J. Tian (2016) pointed out that with the rapid development of China's construction industry, the demand for interior decoration design has increased. At present, traditional interior decoration design has been replaced by new forms of design tools such as computers and has

been widely applied. Compared with traditional manual interior decoration design, digital technology is more convenient and can quickly, effectively, and accurately process various images and graphics. The development trend of China's interior decoration market is becoming increasingly digital, with more and more digital application software emerging, such as computer-aided design (AutoCAD), image processing software (Photoshop), and three-dimensional animation rendering and production software (3Dmax), becoming the foundation and important driving force for the digital development of interior decoration.

G. Zhang (2011) focuses on studying the business model innovation of home decoration enterprises in the context of digitalization, explored how home decoration enterprises can enhance their market competitiveness through business model innovation in the context of digital transformation, analyzed enterprise cases that have successfully transformed relying on digital platforms, and conducted a detailed analysis through the SWOT model. Based on the current development trend of online home decoration platforms, G. Zhang (2011) proposes a new business model – the joint brand business model supported by digital platforms. This model aims to build a comprehensive home decoration solution covering real estate developers, building materials and household goods suppliers, soft decoration companies, design companies and professional decoration teams through in-depth research on the existing digital business model and co-branding strategy. This plan not only focuses on brand cooperation, but also builds a large-scale digital home decoration platform based on layout data by effectively integrating various resources, providing consumers with one-stop and all-round decoration services. Through in-depth research on the needs of home decoration consumers and comprehensive analysis of the current problems in the home decoration market, this research emphasizes the importance of resource integration. It specifically demonstrated how to utilize joint branding and digital platforms to achieve efficient collaboration in the home decoration industry. In the end, this strategy not only optimizes the service process of the home decoration industry, but also meets the needs of consumers in different stages of needs such as complete decoration, secondary decoration, or partial decoration, demonstrating the enormous potential and prospects of business model innovation in the home decoration industry in the context of the digital era.

Ling (2022) proposes that the application of VR technology in indoor interactive design plays an important role in showcasing the visual effects of interior design. As a new type of immersive technology, VR technology is a form of expression with expressive power. When applied in indoor interactive design, it can make the space more realistic, the spatial effect more tense, and the design style more distinct. The way to use VR technology will reflect the immersive, realistic, interactive, and it can be imaginative and provide fun experiences, so that VR technology can be better applied for development. Systematically analyze how VR technology can be applied to indoor interactive design, solving problems such as traditional indoor design that can only present two-dimensional effects, inadequate design, communication barriers with customers, abstracting spatial planning and design, prolonging design time, and increasing time costs.

The application of digital technology has not only brought unprecedented innovation and efficiency improvement to the decoration industry, but also had a profound impact on the production and service modes of the industry. By introducing digital tools and technologies such as 3D modeling software, virtual reality (VR) and augmented reality (AR) technology, big data analysis, the decoration industry can provide more accurate and personalized services. For example, customers can now preview the decoration effect in advance through VR technology, which greatly reduces the frequency and cost of design modifications, while improving customer satisfaction.

In addition, digitization is not limited to the design and presentation stages, but also delves into construction management, material procurement, project scheduling, and other aspects, improving the efficiency and transparency of the entire industry chain. For example, using cloud computing-based project management software can monitor project progress in real time, adjust resource and manpower allocation in a timely manner, thereby shortening project cycles and reducing costs. In terms of material procurement, by analyzing consumer preferences and market trends through big data, enterprises can more accurately predict demand, optimize inventory management, and reduce waste. Meanwhile, digital technology also helps to enhance the sustainability of decorative materials and support the development of circular economy. For example, through digital platforms, waste materials can be more easily recycled and reused, and the selection of new materials is more inclined towards environmental protection and renewable resources.

Due to the labor-intensive nature of the decoration industry, labor plays a central role in determining the productivity of decoration companies. Digital transformation also brings challenges, especially in terms of changing demand for talent. The decoration industry needs more designers and engineers who know how to use digital tools, and also needs to cultivate employees' ability to accept and learn new technologies. Therefore, in addition to technology investment, enterprises also need to invest resources in talent training and education to ensure that teams can keep up with the pace of technological development. Against the backdrop of high-quality economic development, digital transformation provides enormous opportunities

for the decoration industry. By integrating traditional and digital technologies, not only can production efficiency and service quality be improved, but sustainable development can also be achieved, driving the entire industry forward. But in this process, talent training and technological innovation are equally important. Only by constantly innovating can we seize the opportunity in the fiercely competitive market.

Q. Zhang (2022) proposed that the development of China's construction industry also requires an innovative mindset. Companies must seize the historical opportunity of the new round of technological revolution, attach great importance to the transformative impact of digitization, networking, and intelligence on engineering construction, formulate high-quality development strategic plans, achieve transformation and upgrading of engineering construction, and promote sustainable and high-quality development of engineering construction.

X. Wang and Z. Du (2021) pointed out that the construction industry is still relatively lagging behind in the process of digitalization, facing problems such as the lack of building digitalization indicator system and technical measures, digital divide, and digital talent cultivation. The way to adapt to the development of the digital era in the construction industry, researching and exploring the digitalization of engineering projects, enterprise digital transformation, and the construction of corporate level ecological synergy, can help promote the transformation and upgrading of the construction industry, achieve industrial upgrading, and core value reconstruction (Shi, 2021). The financial sharing model is an emerging digital management model introduced from abroad in recent years. Its core idea is to achieve the process and standardization of company business through process reengineering. It is generally suitable for enterprises with large scale, dispersed business, and high overlap of financial shared service centers, hoping to promote the transformation of their financial management models. However, their practical value has not been unanimously recognized.

Ma and Li (2020) selected listed companies in the construction and decoration industry as research samples, divided the industry sample companies into two categories based on whether to establish a financial sharing model, and analyzed the economic consequences of the sample companies that have already established a financial sharing model in terms of operation, profitability, and enhancing company competitiveness before and after building a financial sharing model through horizontal and vertical comparisons, Revealed the potential problems that the company may face in implementing the financial sharing model, and proposed relevant suggestions on how to solve them.

Throughout all industries, the use of digital technologies such as the Internet of Things, 5G

network, and artificial intelligence not only represents the enormous potential for businesses to innovate their business models in the enterprise environment, but this trend may provide new revenue and value creation opportunities for companies (Parida et al., 2019). Companies that can leverage the digital potential of big data and analytics may outperform their peers in terms of revenue growth and operational efficiency. In addition, digital transformation has also promoted the realization of sustainable development. By utilizing intelligent technology to optimize resource utilization, reduce waste, and reduce environmental impact, enterprises can not only improve their own economic benefits, but also contribute to the sustainable development of society and the environment. For example, intelligent building technology can effectively control energy use and reduce unnecessary consumption; Intelligent agricultural systems make the use of water resources and fertilizers more efficient through precise measurement and control, thereby reducing negative impacts on the environment. As more and more enterprises recognize the important role of digital technology in driving business model innovation, improving operational efficiency, and promoting sustainable development, digital transformation has become an indispensable part of enterprise development strategies. However, in the process of achieving digital transformation, enterprises need to face challenges including data security and privacy protection, as well as cultivate cross disciplinary technical talents and change organizational culture to adapt to the rapidly changing digital economy environment. In the future, with the continuous progress of technology and the expansion of application fields, the potential of digital technology will be further unleashed, driving more industries to achieve high-quality development. In order to seize this development opportunity, enterprises need to actively explore and practice, continuously innovate business models, strengthen cooperation with scientific research institutions and upstream and downstream industries, jointly promote the realization of Industry 4.0, and create a better future.

In recent years, although the digitalization process in the construction industry has become a hot topic, there is still insufficient in-depth research on the application of digital technology and its impact on the reform of decoration business models in the field of decoration. The existing literature mainly focuses on general descriptions and preliminary discussions, lacking detailed analysis of the specific problems, challenges, and solutions encountered by decoration enterprises in the process of digital transformation. In this context, this research expands and deepens around the following directions:

The specific application of digital technology: Exploring the application of digital technologies such as AR (augmented reality), VR (virtual reality), AI (artificial intelligence), big data, cloud computing in interior design, construction management, material selection,

customer communication, and how these technologies can improve the efficiency, reduce costs, and enhance user experience of decoration projects.

The impact of digital transformation on business models: An in-depth analysis of the transformation of business models in traditional decoration enterprises during the digital transformation process, such as how to improve the interaction efficiency between customers and society in the fields of rural revitalization, industrial product display, and cultural promotion through the application of digital technology.

Case study: Collect and analyze a series of successful cases of decoration enterprises undergoing digital transformation, summarize their successful experiences and difficulties encountered, and provide reference and inspiration for other enterprises in the industry. At the same time, it is also possible to study cases of failure during the transformation process, analyze the reasons for failure, and avoid similar mistakes.

Challenges and countermeasures: In addition to technical challenges, attention should also be paid to the impact of non-technical factors such as talent cultivation, corporate culture adaptation, and legal constraints on digital transformation, and corresponding solutions should be explored.

Through the expansion and deepening of these research directions, more comprehensive and systematic theoretical support and practical guidance will be provided for the digital transformation of the decoration industry, promoting the healthy and sustainable development of the industry.

2.3 Research on dynamic capability

In current academic literature, research on dynamic capabilities of enterprises involves a wide range of fields, including the definition of dynamic capability theory, the influencing factors behind it, how it evolves, the different dimensions that make up dynamic capabilities, and how these dimensions are quantitatively measured. In addition, empirical research on the relationship between dynamic capabilities and firm performance or competitive advantage is also included. This chapter will summarize the connotation of dynamic capability, the origin of dynamic capability theory, and other current research problems, and deeply discuss the concept of enterprise dynamic capability and its influencing factors. The dynamic capability theory is based on evolutionary economics, resource-based perspectives, and core competency theory. It places the research object of enterprises in a constantly changing environment to examine, making this theory more in line with the actual survival status of enterprises. Therefore, it has received widespread attention from the academic and management practice circles.

From this perspective, studying dynamic capabilities is not only to understand how enterprises adapt to changes in the environment, but also includes how to gain competitive advantages by adjusting and optimizing internal resources and capabilities. The study of dynamic capabilities emphasizes how enterprises can quickly identify, seize opportunities, and make necessary organizational and strategic adjustments when facing uncertainty. The core of this ability lies in the ability of enterprises to continuously innovate, and the source of innovation is the ability of enterprises to respond quickly and effectively to changes in internal and external environments. Therefore, research on dynamic capabilities not only focuses on the construction of theories and the definition of concepts, but also places great emphasis on the application and verification of theories in practical management practices.

Since the beginning of the 21st century, competition among enterprises on a global scale has become more intense. In such a challenging and changing environment, enterprises must constantly innovate to enhance their dynamic capabilities in order to maintain a competitive advantage. Numerous studies have pointed out that among the many factors that affect the innovation effectiveness of enterprises, dynamic capability is particularly important. This indicates that enterprises need to flexibly adjust and optimize their resource allocation, processes, and strategies to meet the rapid changes in the market, in order to stand out in fierce market competition.

In academic research, Qian and He (2021) mainly understand and define dynamic capabilities from three theoretical perspectives: organizational theory, evolutionary theory, and strategic management. Among these three perspectives, the strategic management theory perspective is particularly important, emphasizing how enterprises can obtain and maintain competitive advantages through continuous innovation and adjustment. Wei and Zhou (2019) pointed out this point in their research, while Velu (2016) particularly emphasized that in the process of digital transformation, enterprises need to balance efficiency and flexibility, which is the core of dynamic capabilities.

Dynamic capability and operational capability of enterprises complement each other, but there are significant differences between the two in essence. Operational capability enables enterprises to maintain their daily operations and functional operations, helping them maintain their current business status. However, as Teece's (2014) research suggests that operational capabilities alone may not be sufficient in the face of constantly changing business environments, and may even make companies vulnerable and vulnerable to being surpassed or attacked by competitors. On the contrary, dynamic capability focuses on how enterprises can quickly adapt to market and technological changes through innovation and adjustment of existing operational models, thereby achieving long-term competitive advantages. Furthermore, the cultivation and development of dynamic capabilities require enterprises to not only focus on optimizing the allocation of internal resources, but also to pay attention to external environmental changes, including technological progress and changes in market demand, and be able to respond quickly. This means that enterprises need to build a learning and adaptation mechanism that can effectively capture external opportunities and transform them into internal innovation activities. Therefore, dynamic capability is not only the key to successful digital transformation for enterprises, but also the cornerstone for sustained growth and development in the face of increasing uncertainty and complexity in the global market.

In today's rapidly changing business environment, the dynamic capabilities of enterprises have become a key factor in determining their long-term competitiveness. These capabilities enable enterprises to effectively perceive market changes, seize emerging opportunities, and quickly adjust their resource allocation to cope with external challenges. Helfat (2012) and Teece (2014) emphasizes the importance of dynamic capabilities in promoting the evolution of basic capabilities and adapting to external environments, while the work of Xie et al. (2018) delves into the differences between dynamic capabilities and business models and strategies. The core of dynamic capability lies in its ability to not only influence the existing business logic and business model of a company, but also lead innovation and change in the face of uncertainty. Enterprises continuously adjust and optimize their business operations by identifying and utilizing internal and external resources, combined with their strategic vision, in order to maintain a competitive advantage. From a strategic perspective, enterprises need to establish a mechanism that can both reflect current market demand and predict future trends, ensuring that the formation and development of dynamic capabilities match long-term goals. Teece (2018) proposed that strategic planning should be viewed as the long-term organizational behavior of a company, while dynamic capabilities and business models represent mid-term and short-term behavioral adjustments, respectively. This means that enterprises need to build flexible organizational structures under strategic planning in order to quickly respond to external changes while maintaining the sustained development of their core competitiveness. In addition, the cultivation of dynamic abilities is also crucial for improving the personal abilities of enterprise employees. As the cornerstone of enterprise operation, employees' innovative thinking and problem-solving abilities directly affect the formation and performance of the dynamic capabilities of the enterprise. Therefore, enterprises should focus on cultivating a highly adaptable and learning capable talent team to promote continuous innovation and

progress. Dynamic capability is not only related to whether a company can successfully adapt to environmental changes and maintain competitiveness, but also involves how to find and utilize new opportunities in the constantly evolving market. Enterprises can develop steadily in complex and ever-changing business environments by integrating and allocating resources, updating business models, and establishing dynamic capabilities through strategic guidance.

Dynamic capability, as a strategic management concept, emphasizes the ability of enterprises to continuously adapt and innovate in a constantly changing environment, in order to gain and maintain competitive advantages. Its three aspects – process, location, and path – constitute the core framework of a company's dynamic capabilities (Qian & He, 2021). Process refers to the unique operational and management processes formed by enterprises through coordination and integration of internal and external resources, as well as organizational learning and knowledge management. This not only involves the effective allocation of existing resources, but also the acquisition and utilization of new resources, especially in areas such as technology development, product innovation, and marketing.

Location refers to the advantageous position that a company occupies in the market through its unique combination of knowledge assets and complementary assets. Knowledge assets may include proprietary technology, brand value, customer relationships, and professional knowledge, while complementary assets may include production facilities, distribution networks, partners, that match these knowledge assets.

Path refers to the trajectory of a company's historical development, including previous strategic choices, evolution of organizational structure, formation of corporate culture, has a profound impact on current and future strategic decisions. Path dependence means that past decisions will limit or promote future choice space, so understanding and utilizing this is crucial for businesses to achieve long-term success.

Expanding this theory, we recognize that dynamic capabilities are not fixed and unchanging, but require enterprises to continuously learn, adapt, and innovate. For example, with changes in market demand, technological progress, and competitive environment, enterprises may need to develop new capabilities or modify existing ones. This perspective emphasizes the interaction and co evolution between enterprises and the external environment. In addition, the roles of business leaders and managers are crucial in shaping and utilizing dynamic capabilities. They need to have forward thinking, be able to identify potential market opportunities and threats, and have good decision-making ability to make the right strategic choices in uncertain environments. Grant and Baden-Fuller (2018) pointed out that the impact of environmental and strategic variables on corporate performance can be analyzed and understood in depth by

establishing formal models. This modeling method not only helps to understand the interactions between various variables, but can also be used to simulate and predict the potential impact of different strategic choices on corporate performance. Through this approach, firms can have a clearer understanding of their strategic choices in different environments and make wiser and more effective decisions. These models can become important tools for enterprise strategic planning and decision support, helping companies maintain competitive advantages and achieve sustainable development in a fiercely competitive market. The dynamic capability perspective provides a powerful framework to help us understand how businesses survive and develop in complex and ever-changing business environments. By continuously learning, adapting, and innovating, enterprises can develop and maintain these capabilities, thereby achieving long-term competitive advantages.

2.3.1 The birth of dynamic capability theory: framework by Teece et al.

The development of dynamic capability theory is closely related to the research of different scholars on how enterprises can maintain and obtain competitive advantages in rapidly changing environments. Especially in the article, "Dynamic Capabilities and Strategic Management" published by Teece et al. (1997), the concept and framework of dynamic capabilities were systematically elaborated, defined as the ability of enterprises to adapt, integrate, and restructure internal and external resources to cope with rapidly changing environments. Subsequently, the theory of dynamic capabilities has attracted widespread attention in the academic community and gradually become an important research direction in the field of strategic management.

Dynamic capability can be divided into several main dimensions, including perceiving and shaping opportunities and threats, seizing opportunities to achieve new resource combinations, maintaining competitive advantages, and reconfiguring the asset structure of the enterprise. These capabilities enable enterprises to quickly respond and maintain their competitive position in the face of external environmental uncertainties such as technological changes, market demand changes, competitor actions, and policy and regulatory adjustments. In addition to the development of the aforementioned theories, the dynamic capability theory has also made significant progress in empirical research. Researchers attempt to explore how the dynamic capabilities of enterprises in different industries and regions affect their innovation, change, and performance through various methods such as case studies, survey studies, quantitative analysis. These empirical studies not only validate the effectiveness of the dynamic capability theory, but also enrich its content, making it more applicable and instructive.

In the article "Dynamic Capability and Strategic Management" by Teece et al. (1997) marked an important milestone in the development of dynamic capability theory. Prior to this, the ability theory and related concepts only laid the foundation, while Teece et al. further expanded and improved upon this foundation. They conducted a detailed comparison and analysis of four mainstream strategic management models in the mid-1990s, namely the competitiveness model, strategic confrontation model, resource-based view, and dynamic capability model, revealing the characteristics and limitations of each model (Lin, 2009). Teece et al. (1997) pointed out that competitiveness models and strategic adversarial models mainly focus on how to gain advantages and expand quantity in the market, rather than efficiency and optimization of internal resources. In contrast, the resource-based view and dynamic capability model focus on the efficient utilization and integration of internal resources within the enterprise, especially the latter, emphasizing the ability of the enterprise to respond to environmental changes.

The dynamic capability model suggests that successful enterprises not only possess abundant resources and technological assets, but more importantly, are able to effectively utilize these resources and assets to adapt to the constantly changing market and technological environment. This requires enterprises to continuously learn, innovate, and integrate and allocate resources, so that they can quickly respond to external changes and maintain competitive advantages. This idea further explains why some companies can thrive in the global market while others gradually lose competitiveness. The winners are often those enterprises that have efficient management capabilities, can respond to changes in a timely manner, innovate quickly, and effectively integrate internal and external resources. This requires enterprises not only to have valuable technology and resources, but also to have the ability to utilize these resources to respond to environmental changes, that is, dynamic capabilities. Enterprises lacking this ability, even if they have advantages in technology and resources, find it difficult to maintain long-term competitiveness because they cannot effectively adapt to changes in the market and environment. The concept of dynamic capability is particularly important in modern business environments, emphasizing the necessity for enterprises to maintain a competitive advantage in the face of rapidly changing market conditions. The core of this theory lies in how enterprises can adapt to these changes by constructing, integrating, and restructuring internal and external resources.

Specifically, dynamic capability focuses on two key points that have been overlooked by historical strategic management theories: organizational processes and updating capabilities. In terms of organizational processes, enterprises must have flexible mechanisms to adapt to the

market environment, including rapid response to market changes, timely adoption of technological innovations, and keen insight into future market trends. This means that enterprises need to constantly learn and update their operational methods in order to integrate current practices and learning models, and create organizational culture and structures that can immediately reflect market and technological changes. The updating of capabilities focuses on how enterprises can update their core competitiveness through strategic management to adapt to changes in the environment, especially how to integrate and allocate internal and external resources, skills, and functions to enhance enterprise capabilities. This involves the effective utilization and allocation of existing resources of the enterprise to ensure that it can maintain its competitive position in the market. Furthermore, the framework of dynamic capability can be divided into three dimensions: process, potential, and path (3P model).

This model delves into how enterprises can enhance the specific use and complementarity of their assets through continuous coordination, learning, restructuring, and transformation, thereby forming unique competitive advantages. In this process, specialized assets - such as specific factories and equipment, knowledge assets, as well as reputation and relationship assets - play a crucial role as these assets determine the operational quality and competitive position of the enterprise. At the same time, dynamic capability also emphasizes the path dependence of enterprise capability development, that is, the future direction of the enterprise is constrained by its existing position and historical evolution trajectory. Managers need to continuously reconstruct resources and capabilities based on the current state and future development path of the enterprise, identify and cultivate the special abilities of the enterprise in a targeted manner, and carefully choose the market and timing to enter. Finally, the dynamic capability theory advocates that business managers should focus on optimizing internal processes within the organization, strengthening core skills and capabilities, and guiding the future development direction of the enterprise through astute investment decisions. This theoretical framework provides a methodological guidance for businesses to seek and maintain competitive advantage in a constantly changing business environment.

The uniqueness of this model lies in its integration of not only static strategic factors, but also the characteristics of dynamic processes, thus proposing a comprehensive perspective on dynamic capabilities. The structure of static strategic elements emphasizes that dynamic capability is not a concept detached from reality, but has its specific support and role in the process of strategic management. This structure recognizes the essence of dynamic capability, which is not singular, but multidimensional and involves various resources and capabilities within the organization. The dynamic process characteristics reveal the core of dynamic capability, which is its ability to adapt to rapid environmental changes, enabling organizations to continuously allocate resources and upgrade capabilities, thereby maintaining an advantage in competition. This highlights the innovation of dynamic capability theory, which focuses on how organizations can adapt and utilize changes in the external environment through change, rather than relying solely on existing resources and capabilities.

This model further goes beyond the traditional concept of core competencies and points out that the logical relationship between dynamic capabilities, manufacturing capabilities, and products is a new source of competitive advantage. This perspective holds that it is not only the company's existing products and services, but more importantly, how the company can quickly innovate and adjust its product line and services to respond to market changes, which is the key to maintaining a competitive advantage. By establishing such a theoretical framework on dynamic capabilities, the authors have pioneered the new sources of competitive advantage and pointed out the main content and value of dynamic capabilities. Their work has made significant contributions in the field of dynamic capability research, providing a theoretical foundation for future researchers and a new way for businesses to think and practice dynamic capabilities to gain and maintain competitive advantages.

Since Teece et al.'s theory (1997), many scholars have been committed to further enriching and expanding the theory, and a series of achievements have been achieved. The scope of research has been expanded from the connotation and extension of dynamic capability to the characteristics, evolution of dynamic capability and its impact on sustainable competitive advantage. At the epitaxial level, the present research mainly involves dynamic competitive advantage and other specific forms. Khaligh et al. (2020) analyzes 30 top knowledge-based companies in the growth center of 6 advanced universities engaged in the field of electronics and informatics in Iran proves that differentiated dynamic capabilities and knowledge-based methods can gain competitive advantages for the studied enterprises. Correia et al. (2020) took 1190 Portuguese enterprises as samples and used structural equation model to test the mediating effect of dynamic capability and competitive advantage. The results confirmed the hypothesis of the mediating effect of competitive advantage (differentiation and cost leadership) on the relationship between dynamic capability and enterprise performance. C. Tang (2003) also proved that the core essence of dynamic capabilities of enterprises is knowledge, and the dynamic mechanism of knowledge formation is the fundamental guarantee of sustainable competitive advantages of enterprises. J. Wang and D. Zan (2015) took Toyota Motor Corporation as an example, this research made a case study on the relationship between dynamic capability, crisis management and enterprise competitive advantage. The results of the case study show that dynamic capability can play an important role in the process of enterprise crisis management and enable enterprises to regain their competitive advantage. The scientific nature and validity of the theoretical model are proved. Teece (2014) shows that dynamic capabilities are difficult to be copied by competitors, because they are built on the characteristics of entrepreneurial managers and the practices and culture honed by the history of the organization. They are a unique and valuable resource, and strong dynamic capabilities can serve as a solid foundation for sustainable competitive advantage. Stadler et al (2013) verified the direct positive correlation between a company's dynamic capability and its business performance and probability of survival. In a constantly changing environment, for an organization without dynamic capabilities, its competitive advantage and viability will be short-lived.

Regarding the manifestation of dynamic capabilities in enterprises, Teece (2018) suggests that these capabilities are largely supported by organizational practices and processes, but these processes may change due to non-traditional management interventions. If an enterprise has strong dynamic capabilities, it can effectively build and update its resources, assets, and general capabilities, and can reconfigure these elements according to market changes, thereby achieving innovation and effectively responding to market changes, and driving market changes.

From the perspective of corporate resources, Eisenhardt and Martin (2000) defines dynamic capability as a series of clear and identifiable processes, such as product development, strategic decision-making, and alliance building. These processes are clear, specific, non-ambiguous, and non-repetitive, enabling enterprises to integrate resources and form new value creation strategies in an ever-changing market environment. They also pointed out that in successful companies, these processes are comparable and form what is known as "best practices". Compared to the capabilities described from a resource-based perspective, dynamic capabilities exhibit more homogeneity, substitutability, and convergence of outcomes, and are not a direct source of competitive advantage. The effective mode of dynamic capability varies with changes in the market environment. In a gradually changing market, relevant but slightly different environmental experiences significantly affect the development of dynamic capabilities, and periodic small changes promote managers' deeper understanding of dynamic capabilities, thereby forming more effective practices. In a rapidly changing market, the key to dynamic capability lies not in variation, but in selection. The best strategy is to quickly implement and summarize, continuously adjust capabilities. Although the dynamic capabilities of enterprises evolve along specific paths, this process is mainly driven by the learning mechanisms of the enterprise, including repeated practice, experience coding, learning from mistakes, and learning rhythm, which are crucial for the development of dynamic capabilities.

Eisenhardt and Martin (2000) also distinguished two types of dynamic capability changes, one is linear change and the other is nonlinear change, the latter emphasizing the importance of learning mechanisms to overcome path dependence. In the study conducted by Wilden and Gudergan (2015), they explored the theoretical model of how the constituent elements of dynamic capabilities - perception and restructuring - can improve the overall performance of a company by influencing its marketing and technological capabilities. The article points out that companies that can effectively utilize their perceptual abilities can gain a deeper understanding of underserved market segments and customer needs, thereby improving performance by establishing stronger marketing capabilities. Similarly, frequent utilization of perceptual abilities can also help companies identify technological innovations earlier. By strengthening technological capabilities, companies can develop more efficient business models or improve daily operational processes, and utilize new technologies to achieve more efficient resource conversion. Girod and Whittington's study (2017) elucidates dynamic capability from another perspective, stating that organizational restructuring and strategic restructuring are two key manifestations of dynamic capability. They pointed out that in a dynamically changing environment, the positive relationship between organizational structure adjustment and corporate performance will be weakened, while the positive relationship between strategic restructuring and performance will be strengthened. This means that in the face of rapidly changing market conditions, enterprises need to flexibly adjust their strategic positioning and organizational structure to maintain competitive advantages. Through the application of dynamic capabilities, they can effectively respond to environmental challenges and ultimately improve their performance.

From an evolutionary perspective, Winter (2000) analyzed organizational capability and believed that it can be viewed as a set of advanced conventions or inertia behaviors that combine with input flows to provide decision choices for organizational managers when producing specific types of products. Winter further distinguishes organizational capability into operational capability and dynamic capability. Operational capability involves completing specific activities, such as producing a certain product, implementing and coordinating various tasks required to achieve goals through a series of conventions. Dynamic capability, on the other hand, is not directly related to the production of specific products or the provision of specific services. It focuses on building, integrating, and reshaping operational capabilities within and outside the enterprise. Its output is new capabilities rather than the final product, indirectly affecting the enterprise's output by influencing operational capabilities. He also pointed out that both operational and dynamic capabilities include the conventions of executing a single task and coordinating multiple tasks, the latter of which means the need for coordinated efforts between teams. Ability is defined as a set of conventions that enable the execution of an activity, but to be called ability, it must reach a stable and reliable basic level of activity, and a single implementation of an activity cannot constitute ability. Enterprises exhibit differences in specific abilities, which Winter believes is a degree of difference rather than a distinction between them. The learning of specific abilities by enterprises follows the principle of satisfaction. Whether the enterprise clearly allocates resources and attention to acquire specific abilities is influenced by a large number of external factors.

Zollo and Winter (2002) further explored the evolutionary power of dynamic capabilities, emphasizing that careful learning is a key driving force, and studied the mechanisms by which businesses systematically generate and modify business practices to improve business outcomes. They discussed learning mechanisms including experiential learning and deeper cognitive learning processes, and pointed out that these mechanisms collectively shape dynamic capabilities (2000).

In Zott's study (2003), the concept of dynamic capability was thoroughly analyzed, incorporating and integrating theoretical perspectives from scholars such as Nelson, Winter, Eisenhardt, Zollo, and others. He views dynamic capability as a habitual pattern rooted in organizational processes, which guides businesses on how to build resources and evolve their business practices. In Zott's view, the relationship between dynamic capabilities and corporate performance is not direct, but rather indirectly affects economic performance through constantly changing corporate resource combinations, business practices, and capabilities. Zott decomposes dynamic capabilities into three basic processes: mutation, selection, and retention. These three processes exhibit a cyclical repetitive pattern that evolves over time and affects the competitive position of the enterprise. In each cycle, enterprises generate new resource structure variations through imitation experiments, and then select and retain the most favorable resource structure to support their business. In Zott's framework, resource structure is the key unit of analysis, and enterprises participate in market competition by selecting specific resource structures, ultimately determining their performance level. The relationship between dynamic capability and performance is reflected in three key attributes: 1) the timing of resource deployment, which generates adaptive change through imitation and experimentation; 2) Related costs (i.e. the cost of imitation experiments); 3) Learning process. These attributes are closely related to the core process of dynamic capabilities, where the timing of resource deployment is associated with the retention phase, while the learning process corresponds to the selection phase. Zott's research emphasizes how companies can influence their performance by adjusting the timing of resource allocation, managing costs, and strengthening learning. Through computer simulation, Zott found that even companies with similar dynamic capabilities exhibit stable performance gaps due to differences in timing, cost, and learning effects. This indicates that even small initial differences, such as the specific timing of resource deployment, can still lead to significant differences in corporate performance within the industry.

Adner and Helfat's (2003) study delved into the issue of dynamic capabilities, particularly from the perspective of managers, proposing a framework for dynamic management capabilities. This concept emphasizes the importance of managing human capital, social capital, and cognition as three key elements, and discusses how these elements work together with top management to cope with the constantly changing business environment, thereby affecting the performance of the enterprise. The primary element of dynamic management capability is managing human capital. This concept emphasizes the importance of personal human resources possessed by managers, including their past work experience, acquired general knowledge, and more specific industry and enterprise specific knowledge. The accumulation of this knowledge and experience not only enhances the professionalism of managers in different fields, but also enhances their decision-making ability, enabling them to make more accurate and effective management decisions when facing challenges. Managing social capital is the second element of dynamic management capability. This involves the external and internal social networks established by managers. External social capital mainly refers to the relationships established between managers and external personnel of the enterprise. These social connections can provide different resources and information, enhancing the competitive advantage of the enterprise. Internal social capital refers to the social network formed by managers within the enterprise. Through these internal connections, managers can more effectively obtain and allocate resources, promote the flow of information, and thus improve management efficiency and decision-making quality. Management cognition, as the third element of dynamic management ability, focuses on the belief system and thinking patterns of managers. This includes how managers perceive the enterprise and its environment, their values, expectations, and problem-solving approaches. Management cognition directly affects the decision-making process of managers, as it determines which information is considered important and which options are considered feasible. Good management cognitive ability enables managers to identify key information and make timely and effective decisions in complex and ever-changing environments. The study by Adner & Helfat (2003) emphasizes the importance of dynamic management capabilities for enterprises to adapt to environmental changes and improve performance. By cultivating and enhancing management human capital, social capital, and management awareness, enterprises can better cope with market uncertainty and maintain competitive advantages.

The way organizations to reconstruct their capabilities under technological changes has always been a concern for scholars of dynamic capability theory. However, existing research on dynamic capabilities mainly emphasizes the path dependence of capability development and whether organizations can modify their capabilities. They believe that organizations with complementary assets required for new technologies can effectively transit from one technological paradigm to another when facing a shift in technological paradigms. However, existing research rarely involves practical methods for modifying organizational capabilities. In the study of technological discontinuity, scholars have proposed two typical changes in organizational capabilities that technological change can bring, one is capacity improvement, and the other is capacity destruction (Tushman & Anderson, 2018). When facing technological changes that disrupt capabilities, they suggest using new capabilities to replace old ones in the ability replacement reconstruction mechanism. The research on dynamic capabilities based on evolutionary economics proposes a mechanism for modifying existing capabilities through evolutionary reconstruction.

In Lavie's study (2006), a novel capability reconstruction mechanism called capability transformation mechanism was proposed, which combined the external perspective of technological change with the dynamic capability perspective within the organization. This mechanism is considered as an intermediary form of capability reconstruction, located between the substitution mechanism and the evolutionary mechanism, forming a continuous system of capability reconstruction. Specifically, the mechanism of capability evolution focuses on finetuning knowledge and operational practices brought about by organizations through reflection on past experiences, responding to changes in the external environment of the organization, with technological changes being only one of the triggering factors. In contrast, Y. Tian (2020) mentioned the capability substitution mechanism involves a fundamental replacement of all existing operational practices in order to cope with the devaluation of capabilities and fundamental changes in knowledge base. The mechanism of capability transformation encompasses the adjustment, abandonment, and absorption of existing practices, as well as the incorporation of new practices. This process not only retains some of the original operational practices, but also incorporates new operational practices and knowledge, reflecting a flexible response and knowledge fusion between evolution and substitution.

Helfat and Peteraf (2003) proposed the dynamic resource-based theory, which explains the birth, development, and change process of organizational capability through the concept of capability lifecycle, and how this process helps to understand the root causes of differences in organizational capability. They pointed out that the differences in resources and capabilities between enterprises are an important pillar of resource-based theory. However, traditional resource-based theories have not provided a clear framework to explain how these differences are formed. Lack of understanding of the sources of differences in organizational resources and capabilities will make it difficult to fully explain how enterprises use these resources and capabilities to build competitive advantages, and thus unable to provide effective advice and strategies for managers. Therefore, they introduced the capability lifecycle model to explain the process of enterprise capability transformation, which covers various stages of capability formation, development, and maturity, and may further go through multiple sub stages such as mutation, decay, rebirth, replication, redeployment, and restructuring. The changes in each stage are influenced by previous development history, and when a branch of capability occurs, it is often significantly influenced by internal or external factors such as management decisions, market demand, technological progress, raw material acquisition, and policy changes. These factors may all promote the development of capability along its original path or guide it towards a new direction of change, Enterprises need to seize opportunities or respond to threats by adapting to these changes.

In Schreyögg and Kliesch-Eberl's study (2007), they pointed out that organizational ability is formed through the process of organizational learning, which involves the development of selecting resources and connecting them in specific ways. They believe that an organization's ability is a collection of problem-solving patterns deeply rooted in its structure, information flow, communication channels, political atmosphere, culture, and control methods. These elements together constitute an organization's ability and endow it with uniqueness (Henderson & Clark, 1990). When defining organizational capability, we can find a paradox: although the learning process, as a patterned process for problem-solving, endows capability path dependence, the stability of the organization, continuous investment in resources, and the need to establish heterogeneous assets may hinder its ability to respond to environmental changes. Building a complex and reliable problem-solving framework may help maintain a sustainable competitive advantage, but it may also limit the organization's other development choices, ignore diversity, and reduce resilience. Therefore, changing organizational capabilities requires establishing new process systems. From the perspective of system theory, they believe that the construction and dynamization of capabilities should be viewed as two independent and

opposing systems, and through this approach, the adaptability of organizations can be improved.

Since the dynamic capability proposed by Teece et al. (1997), the theoretical framework and empirical research have been significantly expanded. Eisenhardt and Martin (2000) argue that dynamic capability itself is a specific form of best practice that can be efficiently replicated and utilized in rapidly changing market environments. They emphasized the role of "simple rules" in dynamic capability operations, believing that this seemingly simple but highly adaptable rule system can help businesses quickly adjust their strategies and resource allocation when facing new situations.

Zollo and Winter (2002) introduced the concept of learning mechanisms as a key factor in the formation and evolution of dynamic capabilities, proposing that through systematic knowledge accumulation and internal knowledge sharing processes, enterprises can effectively build and develop their dynamic capabilities. They believe that enterprises can continuously improve their ability to handle complex and ever-changing situations through experience accumulation, knowledge coding, and knowledge sharing.

Helfat et al. (2009) further deepened the understanding of the connotation of dynamic capability by proposing "microfoundations" of dynamic capability. They pointed out that the skills, decision-making rules, procedures, and social networks of individuals (such as managers and employees) are the cornerstone of a company's dynamic capabilities. In other words, the dynamic capabilities of enterprises are not generated out of thin air, but rather collective capabilities built upon individual level capabilities. With the deepening of research, more and more scholars are paying attention to the relationship between dynamic capabilities and corporate performance.

Barreto (2009) conducted a systematic review and integration of dynamic capabilities, attempting to reveal how enterprises can achieve competitive advantages through dynamic capabilities, and pointing out that the value of dynamic capabilities lies in helping enterprises adapt to environmental changes, explore new opportunities, and obtain new competitive advantages through restructuring resource allocation. In addition, research on dynamic capabilities has gradually expanded to a wider range of fields, such as innovation management, internationalization strategies, and supply chain management, demonstrating the diverse application paths and broad research prospects of this theoretical framework.

After decades of development, it has become an important theoretical tool to explain how enterprises can achieve sustained growth and competitive advantage in complex and everchanging environments. With the continuous deepening of research, there is still great room for expansion and application prospects in theoretical construction and empirical testing.

2.3.2 Concept of firm's dynamic capability

In the context of the increasingly complex and unstable external environment for the survival of enterprises today, the theory of dynamic capabilities has become a focus of academic attention. Experts and scholars from the fields of organizational economics, strategic management, and organizational theory have conducted in-depth research on the concept of dynamic capability from their respective perspectives, forming a rich and diverse academic landscape with different opinions. Numerous scholars have explored the meaning of dynamic capability under different theoretical frameworks, constructed its theoretical system, and identified its key elements. These efforts have significantly promoted the conceptual interpretation, theoretical construction, and innovative application of dynamic capability theory in practice.

Research results both domestically and internationally indicate that Teece et al., (1997) emphasizes the importance of integrating internal and external capabilities, building, and restructuring within enterprises; Eisenhardt and Martin (2000) argue that dynamic capability involves the process of how a company mobilizes resources to adapt or create market changes, and is the result of resource allocation and strategic practice; Zollo and Winter (2002) defined dynamic capability as an ordered, learning based collective behavior pattern; He (2006) refined dynamic capabilities from market potential, organizational flexibility, strategic isolation, organizational learning, and organizational change; Stadler et al., (2013) pointed out that enterprises with more complex dynamic capabilities in acquiring and developing resources are able to engage in more resource acquisition and development work before commercial activities, and thus achieve greater success; Yeow et al. (2018) proposed that dynamic abilities include the ability to perceive, grasp, and transform; Fanshmidt et al. (2019) describe how dynamic capabilities can bring competitive advantages in changing and resource rich environments, or effectively support low-cost orientation in stable and resource limited environments, by emphasizing the combination of differentiation and low-cost orientation; Correia et al. (2020) studied how dynamic capabilities regulate the relationship between market orientation and competitive advantage. These studies not only enhance our understanding of dynamic capabilities, but also provide valuable insights into how businesses can gain competitive advantages in a changing environment.

2.3.3 The influencing factors of dynamic capability

Researchers generally hold the view that in order for companies to gain a competitive advantage

in highly volatile environments, attention and cultivation of dynamic capabilities are crucial. Dynamic capability refers to the ability of an enterprise to quickly adapt to external environmental changes, integrate internal resources and capabilities, and innovate and respond in the market. The fundamental reason why this ability is valued is the high degree of uncertainty brought about by the rapid iteration of the market environment and the continuous evolution of consumer demand. In this context, enterprises can only effectively respond to external environmental challenges and maintain or expand their market share by continuously learning, adapting, and innovating. Therefore, the cultivation of dynamic capabilities is not only necessary to cope with current market changes, but also a strategic choice for the long-term development and stable competitive position of enterprises. By optimizing internal processes, innovating technology, and flexibly adjusting market strategies, enterprises can maintain their vitality and competitiveness in a rapidly changing business environment, thereby achieving sustainable development.

Scholars have conducted extensive research from different perspectives while delving into the development and influencing factors of dynamic capabilities in enterprises. In the study conducted by Donada et al. (2016), they proposed that the influencing factors of dynamic capability can be roughly divided into external factors and internal factors. External factors mainly include macroeconomic conditions, industry characteristics, and other environmental factors, which provide the background and conditions for the development of enterprises. And internal factors involve the unique organizational structure design and employee skills of the enterprise, which directly affect whether the enterprise can flexibly respond to external changes and effectively utilize internal resources. In specific research, He et al. (2006) conducted an empirical analysis on the impact of dynamic capabilities of enterprises in the Chinese economic environment by conducting a survey of 360 questionnaires. The research results show that changes in macroeconomic structure have a significant impact on the ability of enterprises to quickly adapt to market changes, emphasizing the key role of the external economic environment in the formulation of enterprise development strategies. At the micro level, Wade and Halligan's (2004) research focuses on the impact of resources and operational capabilities on the dynamic capabilities of small and medium-sized enterprises. They believe that the improvement of information resource acquisition and operational capabilities has a significant positive impact on small and medium-sized enterprises to quickly adapt to market demand and seize market opportunities. This indicates that, in addition to external environmental factors, internal resource management and capability enhancement are also key factors supporting the dynamic development of a company's capabilities.

In the early 21st century, Eisenhardt and Martin's (2000) pioneering research proposed exploring the important factors that affect the dynamic capabilities of enterprises from the perspective of knowledge acquisition and integration. Subsequently, Adner and Helfat's (2003) research expanded the understanding of the formation mechanism of dynamic capabilities in enterprises from three different dimensions: human resources, managerial cognitive level, and social capital. They pointed out that these three factors can individually or collectively affect a company's strategic decision-making, thereby indirectly affecting the company's dynamic capabilities. Over time, research on the relationship between knowledge management and dynamic capabilities of enterprises has gradually deepened. Van Reijsen et al., (2015) emphasized the positive role of knowledge management in enhancing the dynamic capabilities of 55 knowledge intensive enterprises through research, while also pointing out that social capital does not always have a significant impact on the dynamic capabilities of enterprises. In addition, Helfat and Peteraf (2015) further emphasizes the crucial role of managerial cognitive ability in shaping a company's dynamic capabilities. Chinese scholars have also made contributions in this field. Zeng (2009) Through conducting research on enterprises in the Pearl River Delta region and using structural equation modeling for analysis, it provides an empirical research perspective for us to understand the dynamic capabilities of Chinese enterprises. Similarly, Ge et al. (2016) conducted an in-depth exploration of the impact of corporate innovation culture, exploratory learning, and exploitative learning on dynamic capabilities using first-hand data collected through questionnaire methods. Their research not only confirms that these factors have a significant positive impact on the dynamic capabilities of enterprises, but also finds that exploratory learning and exploitative learning play a completely mediating role between innovation culture and dynamic capabilities of enterprises.

These studies provide us with a multidimensional, cross time series perspective to understand the formation mechanism of dynamic capabilities in enterprises. By examining from multiple perspectives such as knowledge management, human resources, the cognitive level of managers, social capital, and innovation culture, this study reveals how different factors, alone or in combination, shape the dynamic capabilities of enterprises.

2.3.4 Dynamic capability framework

Why can some companies stand out in fierce market competition and achieve higher profit margins than the industry average? This is the core issue discussed in the field of strategic management. Numerous studies have attempted to answer this question, emphasizing the importance of companies effectively matching their resources and capabilities with the external environment (Andrew, 1997). According to Andrews (1997) and Porter (1985), a company's strategy and capabilities are influenced by the external environment, which in turn determines its profitability. Not only is the influence of macro environment, industry environment, and competitors crucial, but the internal resources and capabilities of enterprises are also key factors in obtaining competitive advantages and achieving economic excess profits. This means that in order to maintain a competitive advantage and achieve economic benefits beyond the industry average, companies must pay attention to external conditions while continuously strengthening and optimizing internal resources and capabilities.

Barney (2016) believes that a company's performance mainly depends on the types of resources and capabilities it controls. Resources refer to tangible and intangible assets used by enterprises to conceptualize and implement strategies, which form the foundation of enterprise operations. Capability is a subset of resources, which enables enterprises to more effectively utilize and integrate other resources. In other words, the level of resources and capabilities possessed by a company determines its competitive position and performance in the market. Therefore, for companies, identifying, developing, and optimizing their resources and capabilities are keys to achieving excellent performance and sustained competitive advantage.

According to resource-based theory, some companies are able to maintain sustainable competitive advantages and achieve higher profit margins because they possess unique and high-value resources. In addition, the theory of dynamic capabilities has further developed this resource-based perspective, although the two are conceptually distinct, they are actually closely related. Dynamic capability is defined as the ability of enterprises to adjust, construct, and restructure internal and external resources, with the aim of addressing challenges in rapidly changing environments and achieving effective transformation and utilization of resources. This definition emphasizes that having unique resources alone is not enough to cope with the constantly changing business environment.

Dynamic capability can be further subdivided into the specific process of perceiving opportunities and threats of change, capturing these opportunities, and transforming them into enterprise value. In other words, dynamic capabilities include the ability to identify, acquire, and effectively utilize new opportunities to ensure that businesses can adapt to environmental changes, thereby creating, expanding, and modifying their existing resource base. These viewpoints clarify the main difference between dynamic capability architecture and resource-based perspectives: that is, dynamic capability architecture emphasizes the importance of continuously developing resource management and application strategies in dynamic and unpredictable market environments. Through such a framework, enterprises can not only

maintain their competitive advantage, but also flexibly adjust their strategic direction under constantly changing market conditions, thereby achieving long-term success and profitability (Di Stefano et al., 2014).

In the field of modern enterprise management and strategic planning, research by Helfat et al. (2009), Teece (2007), and Teece (2014) have put forward several key viewpoints, which particularly emphasize the importance of technological innovation and digital transformation for enterprise success. Firstly, Helfat et al. (2009) and Teece (2014) pointed out that businesses must have a keen perception ability to perceive technological opportunities and other environmental changes. This perception ability enables enterprises to identify, develop, and even jointly develop technological opportunities that meet customer needs, especially in the rapidly developing and constantly changing digital environment. Yeow et al. (2018) further emphasized the importance of understanding and implementing these technological changes in the digital transformation process for corporate strategy.

The second core competency is acquisition ability, as defined by Teece (2014), which involves the process of mobilizing resources within an organization, aiming to fully utilize the needs and opportunities identified through perceptual abilities. This not only requires companies to understand new business opportunities, but more importantly, to decide on specific strategies to seize these opportunities and enhance their own value.

The last key capability is the ability to transform. Teece (2007) discussed this capability and defined it as the process of continuous updating of an enterprise, including alignment and reconfiguration of assets and partnerships, as well as optimization of workflow, departmental structure, and professional knowledge management. Teece (2007) also analyzed in detail how transformation involves the reconfiguration of organizational resources, including improving daily workflows, restructuring departmental structures, managing common professional assets, and establishing effective governance models and knowledge development frameworks. To maintain competitiveness in a rapidly changing technological environment, enterprises must possess three core competencies: perception, grasping, and transformation. Perceived ability helps enterprises perceive changes in technology and the market, seize the ability to effectively respond to these changes and gain value, while transformation ability ensures that enterprises can continuously adapt to external changes and internal optimization needs, thereby achieving success in a constantly changing environment.

The dynamic capabilities possessed by the company aim to support its survival and business growth through resource exploration, commercial utilization, and further development. This ability can directly and positively affect a company's performance and survival probability, as confirmed by the research of Winter (2003). In the ever-changing business environment, organizations lacking dynamic capabilities will face the risk of rapid loss of competitive advantage and survival ability. Enterprises with dynamic capabilities can not only improve product quality, but also quickly capture new market opportunities (Martin, 2011), and enhance supply chain performance through information sharing, thereby improving coordination with suppliers and customers (Marcus & Anderson, 2006; Vanpoucke et al., 2014). From a long-term perspective, dynamic capabilities researched by Fainshmidt (2019) contributed to sustainable competitive advantages by promoting organizational adaptability, enhancing the flexibility and efficiency of organizations in responding to rapidly changing environments (Zollo & Winter, 2002). In addition, this ability also drives internal changes within the company, innovating products and processes to adapt to the continuous changes in the market. Teece (2018) further points out that by building the ability to perceive, acquire, and transform, enterprises can design, create, and refine defensible business models, lead organizational transformation, and provide key impetus for achieving sustainable competitive advantages. In short, dynamic capability is a key element for a company to survive and succeed in a constantly changing market environment. It not only endows the company with adaptability and efficiency, but also promotes long-term sustainable development and competitiveness.

2.3.5 Comparison between core theory and dynamic capability theory

Core competencies refer to the special skills and resources that an enterprise has formed in the long-term development process, which are irreplaceable to its competitors. This ability can enable enterprises to gain an advantage in market competition and improve their competitiveness. In their research article "The Role of Core Competence Across Business Units", Goold et al. (1994) delved into the essence of core competencies and used Canon as an example to demonstrate how to optimize organizational structure and management mechanisms to effectively utilize enterprise resources and enhance core competitiveness. Canon's business strategy is likened to a "spoke" structure, with the headquarters as the core and various product departments revolving around the core like spokes. This structure not only maintains the relative independence between product departments, but also achieves resource sharing and unified coordination of functional mechanisms through the headquarters resource center. This layout strengthens communication between departments regarding key projects and decisions, enabling Canon to effectively allocate resources outside of business units for sharing during the research phase. This means that although resources are ultimately controlled by the

headquarters, each business unit can "lease" these resources as needed, apply them to the market, and create value. This approach not only enhances the efficiency of resource utilization, but also promotes cooperation and innovation among various business departments. By setting up special task forces, implementing career management processes, and cultivating a supportive corporate culture, Canon has successfully tapped into the potential of its internal resources and transformed them into three core technologies that are crucial to the company, resulting in over 60 different products. Through this approach, Canon not only consolidated its competitive position in the market, but also demonstrated how to effectively manage and utilize internal resources to drive the company's expansion into broader market areas. The company can effectively leverage and expand its core capabilities by strengthening organizational management and resource allocation. The case of Canon Company demonstrates that through internal resource integration and effective utilization, enterprises can maintain competitive advantages and achieve sustainable development in complex and ever-changing market environments.

The core competency theory and dynamic competency theory provide us with two different perspectives on how enterprises can apply and develop their unique capabilities. The core competency theory emphasizes how enterprises should efficiently utilize their existing and special abilities or resources to achieve competitive advantages. This viewpoint holds that the success of enterprises depends on how they enhance and replicate their fundamental assets in a short period of time and within a limited scope, in order to improve efficiency or add value. However, the development of this regenerative ability often has strong path dependence, limiting the scope of innovation and long-term development. In contrast, dynamic capability theory focuses on how enterprises can adapt and predict changes in the future environment, build new resource foundations by integrating internal and external resources, and establish their future competitive advantages. This theory emphasizes the reconfiguration and reconstruction of resources by enterprises, with the aim of responding to future environmental changes and establishing new competitive advantages. Unlike relying solely on existing capabilities and rules, dynamic capabilities encourage businesses to break the status quo and create new capabilities and rules through trial and error, experimentation, and exploration, laying the foundation for long-term competitive advantage. In short, the core competency theory focuses on how enterprises can fully utilize their current resources and capabilities to enhance short-term value and efficiency; The dynamic capability theory focuses on how enterprises can cope with long-term environmental changes and build future competitiveness through continuous learning, adaptation, and innovation. Dynamic capability plays a role in
driving change in enterprises, constantly updating internal capabilities, exploring and developing new capabilities, and driving continuous updates and changes in the enterprise.

Static capability plays an important role as a "stabilizer" in enterprises, promoting the improvement of operational efficiency through routine and meticulous management of existing internal capabilities. The core of this ability lies in optimizing and strengthening the application of existing processes and resources, that is, "doing the things at hand better". On the other hand, dynamic capability focuses on leading enterprises to innovate and change to adapt to the constantly evolving market. It involves exploring new opportunities, innovating, experimenting, taking risks, and maintaining an open mindset, ensuring that enterprises can "master and do emerging things". From the perspective of behavioral attributes, dynamic abilities tend to actively seek change, acquire new knowledge through continuous learning and adaptation, and apply it to future development. This ability emphasizes open thinking and innovation, aiming to promote the long-term growth and adaptability of enterprises. Static capability focuses on fully utilizing existing knowledge and processes, reducing risks and improving current operational efficiency through standardization, formalization, and strict control of processes. In terms of target positioning, static capability focuses on the current situation, focusing on how to maximize today's efficiency and profits; And dynamic capability focuses on the future, focusing on how to ensure that enterprises can continuously adapt to changes in the external environment and maintain competitiveness in the long run. Therefore, static capability brings short-term returns, while dynamic capability pursues long-term, sustainable development and success. These two abilities together form the foundation of a company's competitiveness, and the company needs to balance these two abilities in order to achieve the dual advantages of short-term goals and long-term development.

2.4 Digital transformation and dynamic capabilities

Digital transformation involves the comprehensive adoption and integration of digital technologies by enterprises to thoroughly reform their business processes, business models, and ecosystem relationships, with the aim of improving operational efficiency, enhancing innovation, and improving customer experience. At the same time, dynamic capability describes the ability of an enterprise to adapt to changes in market demand, seize new opportunities, or respond to potential threats by integrating and reconfiguring its internal and external resources and capabilities in a constantly changing market environment. These two concepts play a crucial role in the management and innovation strategies of modern enterprises.

Especially in the process of digital transformation, dynamic capabilities are particularly important. With the rapid evolution and widespread application of digital technology, enterprises must constantly adjust and update their business models and operational processes to maintain competitiveness. Having strong dynamic capabilities enables enterprises to more effectively utilize the new opportunities provided by technological progress, and effectively identify and respond to various challenges and obstacles during the transformation process. Therefore, the close connection between dynamic capabilities and digital transformation is crucial for enterprises to achieve sustainable development and innovation.

The study by Bonanomi et al. (2019) delves into the application and effectiveness of these theoretical methods in explaining how digital transformation affects or increases the value of traditional companies that have not yet applied digital technology. Firstly, the Resource Based View (RBV) believes that a company's competitive advantage comes from its unique resources and capabilities. In the context of digital transformation, RBV emphasizes the importance of internal resources within the enterprise, such as technological assets, technological knowledge, and related software and hardware assets. By effectively managing and utilizing these resources, companies can better engage in digital transformation, thereby enhancing their competitive position in the market. Dynamic Capabilities View focuses on how companies can gain and maintain competitive advantages by adapting to external environmental changes and reallocating resources. In digital transformation, dynamic capability is particularly important because it involves how enterprises can quickly respond to market and technological changes, innovate their business models, and improve efficiency and efficiency through technological upgrades. The application of network theory in digital transformation is reflected in how enterprises acquire resources and information by building and utilizing network relationships, as well as how to collaborate with other enterprises on digital platforms to create value together. Platform literature focuses on how digital platforms promote interaction among multiple participants, increase user numbers and market share through network effects, and thus bring value-added opportunities to traditional companies. Sustainability emphasizes a long-term perspective and social responsibility in the process of digital transformation. They focus on how enterprises can achieve more sustainable development models by adopting digital technologies, while considering economic, social, and environmental impacts. The role of entrepreneurial spirit in digital transformation is reflected in how to open up new business areas and market opportunities through innovation and risk-taking. By integrating the above theoretical perspectives, we can have a more comprehensive understanding of the impact of digital transformation on the value of traditional companies.

In the current context of economic globalization and rapid technological development, enterprises are facing unprecedented challenges and opportunities. To stand out in fierce market competition, relying solely on traditional business models is far from enough. Therefore, enterprises must constantly adapt to emerging technological trends and market demand changes, and the key to maintaining their competitiveness lies in cultivating and strengthening their dynamic capabilities. The so-called dynamic capability refers to the ability of enterprises to quickly adapt to external environmental changes by utilizing existing resources, mainly including identifying and perceiving external opportunities and threats, flexibly adjusting and restructuring resources to seize opportunities, and continuous learning and innovation capabilities. Through these capabilities, enterprises can effectively respond to market and technological changes, maintain or enhance their market position. Digital transformation, as one of the important means to achieve this goal, is being adopted by more and more enterprises. By introducing and utilizing advanced digital technologies such as cloud computing, big data analysis, artificial intelligence, firms can completely transform their business models and business processes. This can not only improve the operational efficiency of enterprises, reduce costs, but also greatly enhance customer experience, open up new markets and revenue sources. More importantly, digital transformation can help businesses build a more flexible and responsive organizational structure, making them more adaptable to constantly changing market environments and consumer demands, thereby maintaining a competitive advantage in the digital economy era. The cultivation and strengthening of dynamic capabilities, as well as the in-depth implementation of digital transformation, are crucial for enterprises. This can not only help enterprises better perceive and adapt to changes in the external environment, but also provide strong support for the sustainable development of enterprises. Enterprises should actively explore and practice these strategies to ensure long-term success and leadership in future markets.

Dynamic capabilities play a crucial role in promoting digital transformation in enterprises. Specifically, these capabilities support and accelerate the transformation process of enterprises through several key aspects. Firstly, in terms of perceiving and seizing opportunities, dynamic capabilities enable enterprises to sensitively identify the latest trends in digital technology development through continuous external environmental scanning. This sensitivity helps companies timely discover and utilize new business opportunities, while also preventing and responding to potential threats, ensuring that they always maintain a leading or stable position in the market. Next, dynamic abilities in learning and innovation are equally crucial for digital transformation. With the continuous progress and transformation of digital technology, enterprises must cultivate a culture of continuous learning and adaptation to new technologies. This not only involves learning and mastering technology, but also encourages the creation of an open and innovative thinking atmosphere throughout the organization. Through continuous innovative thinking and practice, enterprises can continuously improve and optimize their business models and solutions, thereby maintaining an advantage in fierce market competition. Finally, the ability to reconfigure resources also plays a decisive role in digital transformation. In order to effectively promote transformation, enterprises need to flexibly optimize and restructure their resources and capabilities. This may include investing in new technology platforms, tools, and systems, or retraining employees to acquire the necessary digital skills and knowledge. By effectively allocating and utilizing resources, enterprises can ensure efficient and smooth execution of their strategies at all stages of digital transformation. Dynamic capability, as one of the key factors for successful digital transformation, enables enterprises to seek and seize opportunities in rapidly changing market environments, continuously learn and innovate, and effectively manage and allocate resources. Only with strong dynamic capabilities can enterprises effectively implement digital transformation strategies, maintain competitive advantages in the global market, and achieve sustainable development.

The relationship between digital transformation and dynamic capabilities is close and mutually reinforcing, and together they constitute the cornerstone for enterprises to maintain competitiveness in the face of rapidly changing market and technological environments. Dynamic capability, including the ability to perceive market and technological changes, seize these changes to create opportunities, and reconfigure resources to adapt to changes, is the core of successful digital transformation for enterprises. By enhancing these capabilities, enterprises can not only quickly adapt to changes in the external environment, but also effectively utilize digital technology to open up new business models, enhance the value of products and services, and drive business innovation and sustained growth. In order to stand out in the digital age, enterprises must invest in cultivating and strengthening their dynamic capabilities, which includes not only technical capabilities such as data analysis, cloud computing, and artificial intelligence application capabilities, but also organizational and strategic capabilities such as flexible organizational structures, open innovation cultures, and forward-looking leadership. At the same time, enterprises also need to develop and implement a comprehensive digital transformation strategy, which involves clearly defining transformation goals, selecting appropriate technological solutions, and establishing an effective change management mechanism to ensure the smooth progress and ultimate success of digital transformation. Understanding and enhancing dynamic capabilities, as well as implementing effective digital transformation strategies, are crucial for enterprises seeking to maintain or even expand their market share in the digital age. This requires business leaders to have a forward-looking perspective, constantly seek opportunities for learning and improvement, and be willing to invest necessary resources to cultivate a corporate culture that can quickly respond to changes while continuously innovating. Through this approach, enterprises can better utilize digital technology to provide customers with higher value products and services, thereby maintaining a leading position in fierce market competition.

2.5 Summary of the chapter

Based on the existing literature review, it can be concluded that although there is extensive research on the dynamic capability theory of enterprise digital transformation within the academic community, a comprehensive theoretical framework has not yet been formed. Numerous scholars have adopted different perspectives and methods to independently analyze and explore this issue. On a global scale, there are abundant research results on digital transformation and dynamic capabilities, providing valuable reference and inspiration for Chinese decoration enterprises in implementing digital transformation. These studies not only enrich the theoretical foundation, but also provide important reference value for the advancement of this study from multiple perspectives, methods, and models.

This study is based on the definition of dynamic capability by Teece (2007), and conducts in-depth analysis of the three core dimensions of perceptual ability, acquisition ability, and reconstruction ability. In the study by Teece and Leih (2016), it was emphasized that dynamic capability is the result of internal construction within a company, rather than what can be obtained through external purchases. They pointed out that the key to dynamic capability lies in "doing the right thing" rather than "doing the right thing", which reflects the ability of a company to accurately grasp and adapt to change in a rapidly changing market environment. With the continuous progress of digital technology, the strategic planning of enterprises needs to make flexible adjustments to their business models. By building the three dynamic capabilities mentioned above, they can reshape their business models to ensure that enterprises have sufficient defensive and leading advantages. This combination of dynamic capabilities not only helps enterprises to effectively transform and upgrade, but also provides a solid foundation for building long-term competitive advantages.

In the process of analysis, this research not only integrates the background of China's macroeconomic and industry trends, but also combines theory, technology, and relevant

national policies to provide a comprehensive analytical perspective. Through this comprehensive analytical framework (as shown in Figure 2.2), this research aims to provide a systematic theoretical model and practical guidance for digital transformation and dynamic capability construction.



Figure 2.2 Research content framework

From the perspective of dynamic capabilities, decoration enterprises can effectively seize opportunities for digital transformation by keenly perceiving changes in national policies and industry trends. This not only involves actively acquiring resources and knowledge to leverage one's competitive advantage, but also involves establishing sound information systems, optimizing internal processes, adjusting organizational structure, and innovating business models. Through such a series of strategic adjustments and practices, enterprises can launch services and products that meet the requirements of the digital age, thereby breaking through the limitations of traditional cost and value exchange, and capturing new demands in the market. This not only helps enterprises open up blue ocean markets, expand market share, but also significantly enhances their advantageous position in fierce market competition and creates more value for society. In short, under the digital wave, decoration enterprises can effectively respond to changes in the external environment, promote sustainable development and innovation, and ultimately achieve the dual goals of business growth and social contribution by strengthening their dynamic capabilities.

Chapter 3: Research Methods and Data Collection

Chapter II focused on the literature review, which lays a preliminary theoretical basis for the development theory and dynamic capability theory of decoration enterprises in the context of the rapid development of digital technology in China. Chapter III explains the theory and research design of the case study method. This chapter is divided into two sections: the first section explores case study methods, and the second section explains design and data collection of the case studies.

3.1 Case study method

Case study is the main research method of this study. Yin (1984) provides a classic definition of "case study", *i.e.*, it is an empirical inquiry, which researches temporary phenomena in the context of real life. In such situation, the boundary between the phenomenon and its background is not obvious, and researchers would have to use a lot of case evidence to carry out research. As a pioneer of case studies, Yin (1984) describes the designs and methods of specific case studies in his book *Case Study Research: Design and Methods*. Yin (1984) believes that case studies include six stages, plan, design, prepare, collect, analyze, and share.

According to Yin (1984), it is necessary to decide at Plan stage whether the case study is suitable for the research. It is mainly based on three preconditions: whether the research needs to answer the "how" or "why" questions; whether the researchers have very low control over the research objects and events; and whether the focus of research is currently taking place.

At Design stage, Yin (1984) deems the attention should be paid on the construction of theoretical assumptions, clear definition on the analysis scope, and carry out the design of case study. The design process includes integrated single case study, embedded single case study, integrated multi-case study and embedded multi-case study. Case studies are conducted after the completion of design process, and the conductors shall ensure the quality of the case study in each stage, to ensure the reliability and validity of cases.

The Preparation stage includes the preparation of case researchers' skills, as well as the preparation of case studies (training, drafting, case screening, and conducting experimental research). Researchers should have the ability to ask good questions and to "listen". They should also pay attention to firmly controlling the topic to avoid prejudice or being guided by

the respondents. The case study includes six main data sources: interview, direct observation, participatory observation, documents, archives and physical evidence. Each source has its advantages and disadvantages, and different data sources can be cross-examined by each other.

Therefore, in Collection stage, different data sources should be used to fuse the evidence to form an "evidence triangle" to verify the rationality of the research results. In addition, a case study database should be established to form a "chain of evidence". The formation of a complete "evidence chain" involves rigorous reasoning of various evidences, which means clarifying the relationship between research problems, data and conclusions.

The general strategy in Analyze stage is to describe the case according to the theoretical assumptions, integrate the nature and quantitative data, and test the "opposing competitive interpretation". The research strategy is embodied in five analysis techniques, which are used together with the research strategy in the analysis process. The analysis techniques include: pattern matching, constructive interpretation, time series analysis, logical model and cross case clustering analysis.

In Share stage, researchers need to write a case study report, read and modify the manuscript repeatedly.

In 1989, Eisenhardt, a professor of Stanford University in the United States, published a research article in Academy of Management Review, advocates the construction of theory by cases (Eisenhardt, 1989). Since then, her case study theory has gradually become the mainstream thought. Different from Yin's point of view (1984), Eisenhardt (1989) believes that cases can be used to build theories, thus she concludes theoretical construction, relations and logic. She advocates theoretical case sampling and advocates multiple case studies and cross organizational studies through replication. The standard for selecting the number of cases depends on the information could be obtained by increasing the number of cases. Eisenhardt (1989) advocates that to start a case study, it is necessary to define the research problems first, organize in-depth with clear problems and focus, and identify the preset conceptions, which will help researchers accurately measure the conceptions in the research process. However, in order to avoid considering the specific relationship between variables and theory, researchers shall not presuppose theoretical views or propositions, otherwise it may affect the research effect of case construction theory. During the case selection process, a specific population should be selected to facilitate the control of environmental variables and eliminate the interference of other factors. In the process of case selection, the principle of theoretical sampling should be used to select samples, that is, cases that may replicate or expand new theories should be selected according to theoretical needs rather than statistical needs. Eisenhardt (1989) elaborates to select "the total body of the theory to be constructed that can exclude other factors, the samples that can show the overall picture of the theory, and the extreme cases that can particularly clearly explain the theory".

Qualitative and quantitative data should be integrated in the design of research tools and procedures. Quantitative data is conducive to revealing the logical relationship behind the phenomenon, while qualitative data is conducive to revealing the principle behind the relationship. In addition, team members should diversify so that they can complement each other's views and get the observation of restrained and convergence. After entering the case site, data collection and data analysis shall be carried out simultaneously. During the collection process, researchers shall adopt flexible methods to continuously revise and improve the research problems. In addition, triangle verification, cross use of real-time data and retrospective data should be combined in the data collection. Data analysis shall also be included in case analysis and cross case analysis. In case analysis, it includes a detailed description of each case, and the data is organized in the form of table and chart presentation. Cross case analysis is to analyze and compare multiple case data from different ways to overcome the deviation in the information processing process. There are three main methods for cross case analysis. The first method is the classification or sub-dimension comparison method, which is used to find the similarities and differences between groups. The second method is to find the similarities and differences of each pair of cases. The third method is to categorize by data source. Hypothesis formation is a process of repeated comparison and test. First, conception should be refined, and secondly, to test whether the relationship between conception is consistent with the collected evidence. In addition, replication logic shall be used to improve the credibility of validity, and to verify repeatedly on the relationship between variables through cases. Dialogue with literature refers to comparing the concepts, assumptions and theories formed with the existing literature. Compared with the contradictory literature, more innovation opportunities can be found. Compared with similar literatures, we can connect the usually unrelated phenomena through internal similarity. Finally, when the theoretical saturation is reached, that is, the newly acquired knowledge increment becomes extremely small, the case study can be ended.

In recent years, Chinese case studies are not completely compatible with the research methods from European and American cases. To blindly copy of the research methods from European and American cases is not conducive to the benign development of Chinese cases. In order to solve this problem, Professor Pan of the University of New South Wales in Australia has developed a set of case study methods more suitable for China based on his years of experience in studying Chinese cases (Pan & Tan, 2011). This method can effectively overcome the three disadvantages of the traditional method. The first disadvantage is general principles or guidelines are difficult to be transformed into specific and operable steps. The second disadvantage is that principles can only be realized under ideal conditions, but it is lack of feasibility in reality. The third disadvantage is general principle emphasizes the importance of flexibility without explaining how it can be achieved. In view of the shortcomings of these traditional case study methods, Pan and Tan (2011) introduces a structured-pragmatic-situational (SPS) research method, referred to as SPS research method, which specifically includes eight operation processes.

In SPS research process, the first step is application for admittance, and enter the design cycle after obtaining the admittance permit. The design cycle includes three steps: conceptualization of phenomena, initial data collection, and establishment and improvement of theoretical perspectives. Specifically, prior to collecting the initial data, researchers should understand the background information of the enterprise, the phenomena of interests and the relevant theories, as the step will form a psychological impression of the phenomenon. Then, a preliminary overall interview will be conducted to confirm the researchers' views on the phenomenon in the research, and the initial data were collected and sorted out to lay the foundation for theorization. In the initial stage, researchers will establish and improve the preliminary theoretical perspective, which can guide the refinement of concepts related to phenomena and facilitate the collection for extra data. After the iterative use of additional data, the refinement of new constructs and assumptions will be further promoted. The design cycle will not stop until it reaches the theoretical certainty. The achievement of theoretical certainty means that researchers are very confident in the theoretical perspective. Confirmed by case data, the theoretical perspective is an accurate reflection of reality and can make sufficient contributions to theory and practice.

Next, the study enters the improvement cycle. In the improvement cycle, researchers need to collect additional data to transform the theoretical perspective into a mature theory. Through qualitative data analysis, all previous data are coded, organized and inspected. The gradually formed model should be consistent with the empirical data and existing literature. This is the process of theory, data and model cross-examination. Through this process, the core mechanism of the model is extracted to achieve theoretical saturation. The achievement of theoretical saturation means that the newly collected data show repeatability, the collection of new data can not affect the theoretical model, and the theoretical model has reached a perfect state. After the improvement cycle, researchers can complete case study report based on the final results.

According to the specific research questions and research purposes, the case study design can be distinguished in two dimensions. The first dimension is integrity and embeddedness. In a case study, more than one analysis unit may be included. When the case study needs to analyze the internal members (secondary analysis units) of the research object, and sampling technology is used for sampling analysis, the mode of case study is embedded (YIN, 2004). For example, when a case study is conducted for a hospital, the organizational members (doctors, nurses, and administration staff) in the hospital will be analyzed, as well as the clinical treatment in the hospital. On the contrary, when the case study only focuses on the overall characteristics, the research design is holistic.

The second dimension is the design method for single case and multiple cases. According to Yin (2004), the scope of application of a single case study is mainly five scenarios. The first scenario is to critic or test a widely accepted theory. The second scenario is to analyze an extreme case or a unique case. The third scenario is to study representative and typical cases. The fourth scenario is to study enlightening cases. The fifth scenario is to study vertical cases.

For multiple case studies, Yin (2004) believes that the research logic of this method is similar to multivariate experiments and follows the replication logic. In the study, after careful selection, different cases can produce the same results (item by item replication) or different results (differential replication) due to known differences. This replication logic makes the research results more convincing, and can even be used in the mature theory construction process.

In summary, the case study methods discussed in this section have structured a solid methodological foundation for the following case study, on digital transformation of Chinese decoration enterprises from the perspective of dynamic capabilities.

3.2 Study design

The starting point of this study comes from the digital transformation of Chinese interior decoration enterprises, hoping to explore the relevant content of digital transformation by analyzing the dynamic capabilities of decoration enterprises. To achieve this goal, it is necessary to first describe the digital transformation of enterprises, analyze the specific challenges and strategies, and summarize the dynamic capability characteristics. In the current research, researchers hope to explore, describe, and explain this issue through two stages of case studies.

In the first stage, an embedded single case study was used to vertically track the digital transformation process of an interior decoration enterprise. In this case, the researcher will

describe the development history and transformation process of the enterprise, summarize the key events of the enterprise's development and the specific challenges it faces, analyze the specific transformation path adopted by the enterprise, describe the work team involved, and preliminarily characterize the dynamic capability characteristics related to it. In the second stage, based on the replication logic, researchers will adopt a holistic multiple cases study to observe several companies with different situations and conduct the analysis. Further research by explaining or describing the causal relationship between variables will attempt to prove that, although these enterprises have different situations and change strategies, the positive relationship between dynamic capabilities discovered in the first stage and digital transformation is universal.

Based on the above research methods, the technical roadmap is shown in Figure 3.1 below.



Figure 3.1 The case study procedure of the digital transformation of Chinese interior decoration enterprise based on dynamic capabilities analysis

3.3 Case study theory hypothesis

Many scholars have proven through empirical methods that there is a positive correlation between dynamic capabilities and corporate transformation. From the definition of Dynamic Capabilities, interior decoration enterprises can break the ineffective path of dependence characteristics through dynamic capabilities, thereby achieving adjustment to resource reallocation and performance improvement. The Dynamic Capabilities model would help enterprise chooses a more suitable development path for the environment, and achieves sustained competitive advantage. Specifically, enterprises can maintain their strategic path in line with external environmental processes under the joint action of three dimensions. The first dimension is perception and judgement of dynamic capabilities. The second dimension is learning absorption and acquisition of applications. The third dimension is organizational restructuring, thereby achieving transformation and sustained competitive advantage.

(1) Perceived judgment ability and digital transformation

Perceived judgment ability includes two aspects, one is the perception and understanding of the information released by the environment as a source of information, and the other is to identify the opportunities and challenges brought by this information and make appropriate decisions quickly. Both aspects are related to the quick response of decoration enterprises. Decoration enterprises have a significant dependence on external factors, such as policy factors, customer preferences, competitor behavior, supplier behavior of materials and equipment, and economic factors. Enterprises must quickly develop and explore opportunities and threats in the environment in order to timely and correctly identify and reshape their competitive advantages in the market. At the same time, perception and judgement are also important measures for senior leadership to gain sustained advantages in the current competitive traditional construction industry. They need to be able to keenly capture subtle changes in the market and shifts in customer preferences, and respond quickly. This not only requires them to have excellent intuition and insight, but also requires a scientifically effective decision-making mechanism to support them. It is worth noting that the speed of decision-making often determines the success or failure of a business. In a fiercely competitive market, Mu et al (2016) found any hesitation and procrastination can cause companies to miss opportunities, increase unnecessary costs, and even lead to the disappearance of their competitive advantage. Therefore, for decoration firms, cultivating and improving their perception and judgment abilities is not only the key to enhancing competitiveness, but also the cornerstone to ensure the long-term survival and development of the companies.

(2) Learning to absorb and acquire application capabilities and digital transformation

Learning absorption ability is a crucial step for enterprises to overcome existing inefficient, ineffective paths and conventions. It is also a crucial step in the primitive accumulation of a large amount of resources and knowledge in an evolutionary process. In enterprise strategic path evolution, the more knowledge and related resources a company learn and absorb, the greater the amount of information it receives, and there will open up more path plan options. This leads to the formation of more path transformation plans within the company, which are closer to the optimal path, and can also improve the company's performance level. Through the behavior of learning, at the end of enterprise operation, individuals can quickly transform their best practices in work into successful experiences suitable for enterprise transformation, and gradually improve their management capabilities and thinking through internal explicit and coded knowledge management mechanisms. This approach thereby continuously softens the rigidity of conventions and supporting stable digital transformation of enterprises (Mu, 2017).

For decoration enterprises, due to their strong dependence on the market environment, their employees need to directly contact the market, customers, and actual projects. Therefore, they can actively absorb and accumulate experience and knowledge in practice, and this learning and absorption ability can ensure that decoration enterprises have more advantages in similar projects. At the same time, when facing various temporary practical problems, employees often burst out with more innovative ideas, which not only solve problems but also promote technological progress, reflecting the core idea of dynamic capabilities. Experience, knowledge, and innovative thinking have great potentials to enhance the innovation of various processes, technologies, management, and organizational structures in decoration enterprises, forming more effective practices, improving the overall performance and stability of the enterprise.

When enterprises adjust and reform their strategic paths, a large number of path plans within the enterprise will emerge for options. Choosing path plan is a crucial step for the survival of the enterprise. The path chosen by enterprises in a changing environment must meet the following requirements: (1) Can this path lead to a positive performance feedback of the decoration enterprise's operational level; (2) Can this path enable the operational performance level of the enterprise to reach above the average of the construction industry and have strategic uniqueness; (3) Whether it meets the customer's needs. Therefore, firms need to go through a complex social process from the initial operational level to the new path dependence, and Walsh (1995) pointed out that this change is essentially manifested as a change in the knowledge structure of decision-makers. When the current knowledge is not able to meet the expected performance level, the knowledge system of this path plan needs to be adjusted in a timely

manner (M. Liu, 2019). The specific manifestation is that when the enterprise finds that the current strategic path is not able to achieve the expected goals, it will treat the current event as a problem and adopt new path solutions for experimentation to solve the current problem. If the selected path scheme is not able to solve the problem, the enterprise will revise the experimental behavior based on the emerging problems, and carry out new experimental behaviors until a path scheme that is satisfactory to the enterprise. Obviously, when a decoration enterprise ultimately chooses a certain plan, based on the conditions for path dependence, this path may not be the only optimal or one of the best paths, but it could be the most suitable path that meets the current operational needs and matches the complementary assets of the enterprise, so as not to cause too much blindness in the path adjustment process. This also conforms to Teece's (2007) assumption of resource reset in his work.

For decoration enterprises, the learning and absorption application of dynamic capabilities is particularly important. Taking large decoration enterprises in China as an example, when the external environment undergoes drastic changes, their organizational structure, operational scale, management mode, and operational structure are difficult to quickly adapt to such changes. Therefore, their strategic adjustments often come from macro regulation at the upper level, which has a significant blindness. For example, the traditional engineering and construction market in China has excessive competition, and many large decoration enterprises lack sufficient research on strategic paths. Without comprehensive judgement and test, many decoration enterprises blindly adopted the strategy of diversification business, and entered industries unrelated to their core business, such as mining, smelting, finance, real estate, and other sudden trending industries. This has led to the large-scale dispersion of high-quality funds, which do not have significant professional, technological, and brand advantages in these markets, resulting in adverse consequences, such as a broken capital chain and increased business burden. As the trend of diversification fades away, enterprises gradually seek strategic ways to match their own advantages in practice, draw on their trial-and-error experience, adopt a strategy of moderate extension of the industrial chain and vertical integration, implement more effective resource reallocation methods, eliminate inefficient and ineffective assets, and fully leverage the financial advantages of large state-owned decoration enterprises. Those companies adopt more comprehensive models, such as EPC and PPP, to occupy half of the construction market and firmly occupy the leading position in the construction market.

The knowledge of enterprise strategic path planning must be reflected in organizational practices, and the selected path planning must be expressed as a complete set of processes and models for enterprise operation through knowledge acquisition and application capabilities.

This means experiential implicit knowledge, existing in the minds of enterprise employees, can be expressed as the ability of organizational collective behavior patterns. Lu (2008) pointed out that in the final stage of strategic path evolution, applying specific knowledge from one or several disciplines to a company's specific business can form specific competitiveness in a certain link, and integrating this series of specific business capabilities can form the core competitiveness system of the enterprise. At present, many studies have pointed out that the core competencies of enterprises are essentially knowledge systems. The heterogeneity of enterprises comes from their knowledge structure, and the acquisition, application, and expression of knowledge determine the scalability of their core competencies. Only by repeatedly applying knowledge can a large amount of new information be generated, and by evaluating, classifying, and analyzing this information can organizational practices be formed or modified. This fully reflects the importance of knowledge acquisition and application capabilities in maintaining the digital transformation of decoration enterprises.

For decoration enterprises, their core competitiveness largely comes from their eyecatching products, technologies, and services reflected in completed projects. With the gradual improvement of information technology, decoration enterprises with strong knowledge acquisition and application capabilities can effectively integrate and apply relevant knowledge from projects, emerging new technologies and concepts in the market to future operational processes.

(3) Organizational restructure flexibility and digital transformation

The flexibility of organizational restructure in enterprises determines whether they can perceive and make predictive decisions on path adjustment and evolution behavior in a chaotic dynamic environment. It determines whether enterprises can continue to have the freedom to acquire, absorb, and apply resources and knowledge, and determines how many new knowledge structures can be smoothly reflected in conventions to form new strategic paths. As Volberda (1997) pointed out, the premise of creating value through flexibility must be combined with stability. Strategy can break through core rigidity and form new effective path dependencies under the premise of flexible changes, thereby promoting the sustained competitive advantage of enterprises. For decoration enterprises, this flexibility is largely reflected in organizational, cultural, and management models. Strategic flexibility can make decoration enterprises more efficient in resource and knowledge conversion, and save a lot of time, manpower, and financial costs. Compared with large state-owned decoration enterprises and private enterprises in China, private decoration enterprises have more flexible organizational and management models. The development model guided by technological innovation and service innovation often enables

private decoration enterprises that do not have advantages in capital and brand to quickly seize fleeting opportunities in the construction market. Therefore, they can also have high profit margins and occupy an important position in the construction market.

Therefore, based on the above discussion and analysis, this study proposes three assumptions as follows.

Assumption 1: Perceived judgement ability has a positive linear relationship with the digital transformation of decoration enterprises.

Assumption 2: Learning to absorb and acquire application capabilities has a positive linear relationship with the digital transformation of decoration enterprises.

Assumption 3: Organizational restructure flexibility has a positive linear relationship with the digital transformation of decoration enterprises.

The digital transformation of enterprises is preserved by the following selection criteria of objective environmental changes. For the same objective environment, enterprises under the influence of bounded rationality and subjective tendencies may make completely different decisions. For enterprises with weak dynamic capabilities, their past successful experiences and strategic cohesion will make their perception and judgement ability dull, making them less sensitive to opportunities and threats. The continuous competitive advantage gradually erodes due to the formation of core rigidity. Thus, this study proposes linear relationship assumptions between the dynamic capabilities of decoration enterprises and their digital transformation. However, enterprises with strong dynamic capabilities, especially those new and innovative enterprises that want to seize market competitive advantages at any time, are good at exploring possible opportunities through environmental information judgement, and will use innovative means to adjust their paths to seize seemingly tempting market opportunities. However, a possibility may arise. Firstly, due to the asymmetry of information, this seemingly tempting market opportunity is actually a trap that does not fit the actual development strength and complementary assets of the enterprise. It could rashly break the current development path and choose such a path plan will cause the enterprise to pay a large resource allocation cost, sinking cost. If the company found that it is not suitable with the transformation, the company also needs to pay significant costs to vested-interest group and conversion costs. This undoubtedly has a serious impact on the operational status of enterprises, endangering their competitive advantage. Second, in the rapid changing environment, market opportunities are emerging at any time. If the entrepreneurial spirit of decoration enterprises or even opportunistic speculative is too strong, enterprises will adjust the performance difference threshold to a very low level. Even when the operating performance is positive feedback, enterprises have begun to seek changes, and enterprises will fail because of excessive consumption of resources. For example, they may rush to carry out fixed assets investment, holding, leasing, and financial trust businesses in unfamiliar fields. These diversified businesses of the current popular decoration enterprises are actually not conducive to the capital flow of enterprises, and are likely to be different from the uniqueness of decoration enterprises' own businesses. Therefore, there may be a relationship between the dynamic capabilities of decoration enterprises and digital transformation, which is indispensable and too much is not enough.

3.4 Research design

Research design focuses on answering the questions of "How" and "Why" regarding the implementation path of digital decoration in traditional Chinese decoration enterprises and "how to apply digitalization to decoration enterprises", which is suitable for case studies. Usually, cases are chosen for their substantial or theoretical significance (Ragin, 1999). The frequent criticism of case studies is that they rely on a single case, making it unable to provide a generalizable conclusion (Eisenhardt, 1989). Eisenhardt (1989) believes that case studies can be a starting point for theoretical development, and she believes that cross case analysis involving 4 to 10 cases would provide a good foundation for analysis and induction. The conclusions derived from multiple cases are often considered more convincing, and therefore the entire study is often considered more robust to scrutiny.

Given the above advantages and disadvantages, this study will select multiple cases as research objects to observe the market situation of decoration enterprises of different scales and properties, and explore their digital characteristics. First, provide a detailed description of each case, and then begin to identify the patterns that exist between the cases. The approach will first introduce four different cases, verify the performance of the enterprise in digitalization one by one, and then group and compare the cases to find similarities or differences between the groups. Designing a case study plan is the most challenging part of the research process, each type of case study has its implicit research design. It is a logical sequence that connects the questions to be studied and the final conclusions using empirical data.

3.4.1 Case selection

In the selection of target enterprises for case study, the rationale is based on the basic principles of enterprise inspiration, data availability, and case typicality. Four companies in the interior decoration industry that have undergone digital transformation are selected for case studies. By

organizing the daily operations, resources, and advantages of these four companies, the current digital development status of the companies has been sorted out, and a theoretical model between digital transformation and dynamic capabilities of decoration companies is constructed. Research is conducted around the basic relationship between various variables, and market opportunities and specific implementation strategies for each stage of development are sorted out. This has certain guiding significance for other similar enterprises.

3.4.2 Data collection

According to Yin (2004), proposing a theoretical foundation as the initial point for collecting case data based on literature analysis can improve the efficiency of data collection. If the theoretical foundation and the starting point of the proposition are not clear, case researchers will be lost in a large amount of complex data and unable to draw accurate conclusions. Based on this, the theoretical foundation of this study is the market development theory of decoration enterprises under the background of rural revitalization in China, and the dynamic capabilities theory. It studies the key factors that promote the innovation of business models in the continuous perception of opportunities, acquisition of resources, and reconstruction of enterprise development process under the Chinese context.

Yin (2004) suggests following four criteria in case studies. The first criterion is constructs' validity. There are two ways to enhance the constructs' validity in case studies by testing whether the case researchers have established objective, correct, and actionable measurement standards for the concepts or variables to be studied during the data collection stage. The process is to first establish an evidence chain that can effectively link research questions and conclusions, and elaborate on the data collection process. The second step is to provide different types of data triangulation; The second criterion is internal validity. It also known as logical validity. Three measures in the second criterion can enhance the internal validity of case studies, the measure is establishing a clear research framework, constructing pattern matching between variables, and using theoretical triangles to achieve multi-angle argumentation. The third criterion is external validity. It also known as generalizability. It tests the extent for research conclusions based on one or a few cases have universal applicability. Eisenhardt (1989) suggests that research results can be generalized to a wider category of cases through 4-10 cross case studies. Yin (2004) suggests that nested multiple cases studies within the same case can also improve the universality of research results. At the same time, it is necessary to define the scope of application and influencing factors of research conclusions. The fourth criterion is reliability. It is to test whether the case study procedure is replicable, *i.e.* if others can draw the same conclusion by following the same steps, the transparency of the case study can be enhanced by providing the establishment of a case study database and providing real information about the case enterprise.

Based on the views of the scholars mentioned above, this study follows the principles below when collecting data:

(1) Using multiple data sources. The researcher used various data collection methods, including on-site interviews, telephone interviews, field research, questionnaire surveys, on-site observations, focus group discussions, archival records, documents, and references.

(2) Establish a case study database. The case study database established by the author includes the collection of relevant public information about the target enterprise, from the company's website and journal based on theoretical foundations during the interview preparation stage. It also includes the design of the case interview outline, the summary of onsite transcripts and recordings of the interview process with the consent of the interviewee, and the organization and analysis of the interview records and recordings after the interview. In addition, this also includes other paper materials and internal related documents requested from the enterprise. The documents are classified and organized for future data analysis.

Chapter 4: Case Study of Decoration Enterprise Transformation from the Perspective of Dynamic Capabilities

Based on the literature review in the previous chapter, the study has formed a preliminary model framework and research proposition. In this chapter, the researcher will adopt a vertical case study with time span to achieve the following purposes: (1) to verify and test the above models and propositions; (2) to further explore the more detailed process mechanism contained in the above model and framework through rich information within time span; (3) to seek revising and improving the model based on case studies, especially combining with other enterprise application practices to grasp the influencing factors and mechanisms in the model. This chapter will then present a discussion of the case study results.

4.1 A single case study on embedding of enterprise digital transformation from the perspective of dynamic capabilities

4.1.1 Questionnaire design and measurement of variables

This study belongs to the field of strategic management, and many of the variables involved in the above assumptions are not directly obtained from publicly available data. Instead, the study needs to approach decoration company employees through survey questionnaires to obtain firsthand data. Therefore, based on a systematic review and summary of existing literature, the researcher designed an initial questionnaire in accordance with scientific and reasonable principles. On this basis, the final questionnaire is form through multiple discussions and organization within the team, and inviting peer scholars to provide relevant opinions on the rationality of the questionnaire.

The variables in this study were measured using the Likert scale, which is generally believed equidistant. To avoid ambiguous overlap in content, this study did not use a 3-point scale, and to avoid excessive selection of content and increased reading volume, a 7-point scale was not used. This study implements a 5-point scale to measure each variable. In the survey, 1 represents complete disagreement, 2 represents disagreement, 3 represents general agreement, 4 represents comparative agreement, and 5 represents complete agreement. The specific

measurement scale design for relevant variables is as follows:

(1) Continuous competitive advantage

The key competitive advantages of decoration company lie in: 1. Being higher than the average industrial performance; 2. Provide products or services that satisfy customers; 3. Has strategies are in non-imitation.

Zhou and Xiang (2003) succinctly proposed that this advantage is reflected in three aspects, namely enterprise value, customer value, and competitive advantage. The core goal of an enterprise is profitability, and the quantitative evaluation of competitive advantage is often reflected through enterprise performance, which is closely related to enterprise value, customer value, and competitive position. Enterprises with competitive advantages are more popular with customers, have higher operational efficiency, and thus exhibit higher corporate performance. When measuring "sustained" competitive advantage, scholars suggest analyzing it through long-term market and financial performance. However, for decoration enterprises in China, there are limited public data and issues with data authenticity. Therefore, this research adopts a subjective comparison method to evaluate sustained competitive advantage by comparing the respondents with their competitors. Meanwhile, the core idea of this study is to drive digital transformation of enterprises through dynamic capabilities, thereby promoting the sustained competitive advantage. Although there is no authoritative research that clearly defines the optimal interval for "calendar time", in order to ensure the sustainability of competitive advantage over a longer period of time, this study chose five years as a reasonable time span to measure sustained competitive advantage. When evaluating the performance of decoration enterprises, this study refers to the views of Dowlatshahi and Cao (2006), and conducts research from three aspects: market performance, financial performance, and reputation performance. Market performance reflects the position and development speed of enterprises in the market, and reflects the direct effect of dynamic capabilities and enterprise value. Financial performance reflects a company's profitability and investment ability, representing its competitive position. Reputation performance represents the degree to which a company is welcomed by customers and reflects its customer value. Specific indicators include "rapid revenue growth" to measure market performance, "high operating profit margin" to evaluate financial performance, and "high brand influence" to evaluate reputation performance. By refining these indicators, the competitive advantage and performance of decoration enterprises can be more comprehensively evaluated. As shown in Table 4.1 below.

Constructs	Variables	Items	Reference
Sustainable competitive	Competitors of	1. Rapid growth in operating revenue	Dowlatshahi
advantages of	Fengyun Tech, in	2. High operating profit margin	& Cao
decoration enterprises	the past 5 years	3. High brand influence	(2006)

Table 4.1 Scale for sustainable competitive advantage of decoration enterprises

(2) Perception ability

Perceived judgement ability is the subjective ability of a decoration company to subjectively recognize, comprehensively analyze, and make timely decisions about the external environment. It includes two interrelated aspects. One is that the decoration enterprise subjectively understands and judges the information feedback from the external environment based on its own knowledge base, exploring opportunities and challenges. The other is to make decision responses based on the judgement results. In this process, managers need to rely on their knowledge base, business insights, and years of market experience to screen, understand, and judge market information. The key to success lies in whether they can make corresponding decisions promptly based on their judgements. The perception and judgement ability proposed in this study should combine the common meaning of both aspects and include the content of "decision-making ability". Predictive decision-making and prompt and flexible response are particularly valuable in the current industry. Therefore, based on the characteristics of the decoration industry, this study expresses the three measurement contents proposed by Neill et al. (2007) with more specific indicators, as shown in Table 4.2.

Constructs and variables		Items	Reference
	1.	The company is able to timely grasp competitor information and respond quickly.	
Perceived judgement ability of decoration enterprises	2.	Companies can invest more resources and time to obtain market information (such as engineering	
		bidding information) and make quick decisions to seize market opportunities.	Neill et al. (2007)
	3.	The company is able to timely understand the development trends of new technologies/construction	
		processes in the construction market and actively learn quickly.	
	1.	The organizational governance and structure of the company remain basically unchanged.	V. Wong
The path dependence characteristic	2.	The company's operating methods generally follow past habits and have not changed much.	et al.
	3.	The business scope of the company is basically fixed and unchanged.	(2011)

The path dependence characteristic exists in the aspects of enterprise operation from top to bottom, including management system, decision-making methods, governance structure, management model, business model. Therefore, this study combines the development history of decoration company and the characteristics of strategic path dependence. At the same time, based on the research perspective of X. Wang et al. (2011), the measurement indicators are refined, and three indicators are used to measure the path dependence of decoration enterprises.

(3) Acquisition capability

The acquisition ability is divided into two levels: ability to learn and absorb knowledge, and ability to apply knowledge.

Learning and absorption ability is a dynamic capabilities behavior that decorates the overall structure of a company. It is the ability of the company to absorb and internalize relevant information, resources, and knowledge. As Cohen and Levinthal (1990) argued, the learning and absorption ability results in differences in the ability of different organizations to assimilate and replicate new knowledge from the outside world. According to Dong (2010), a company has strong learning ability, willingness to learn, and internalization ability if it demonstrates a high level of learning and absorption ability. This dimension also refers to the initial process of resource and knowledge accumulation formed by the new path of enterprise digital transformation. It should be emphasized that learning and absorption ability includes the internalization and transfer of newly acquired knowledge, resources, and external information within the organization, as well as the learning and acquisition of this knowledge. In other words, the ability of a company to learn and absorb information and resources mainly depends on its ability to transform the absorbed knowledge into internal available resources.

This research proposes that, the knowledge and resources absorbed by companies at this stage, with the meaning of utilization and internalization, are not necessarily the path of knowledge that companies ultimately need. Thus, the learning absorption ability mainly considers the acquisition, integration and creation of knowledge by enterprises. The creation and utilization of knowledge is covered in the dimension of knowledge application ability. Decoration companies are based on engineering projects as the basic production unit, and their learning and absorption ability should be reflected in three levels of learning, individual level, project level, and enterprise level (Hao, 2014). Therefore, individuals must continuously learn updated technologies and processes, and form individual experiences in the form of implicit knowledge in the organization. The organization must have a cultural atmosphere that encourages employees to learn. Subsequently, under the guarantee of a good knowledge sharing and integration mechanism, enterprises can form good project and enterprise learning capabilities. Therefore, combining the measurement items of Baker and Sinkula (1999b) and Jansen et al. (2005), this study designed three indicators to measure the ability.

Regarding the concept of knowledge application ability, the scope of knowledge application

ability proposed in this study is relatively broad, and its main focus is on the ultimate "application" of knowledge. In some studies on dynamic ability from the perspective of knowledge management, the process of learning and absorption also includes the concept of application. However, this study has further refined the process of knowledge utilization. The knowledge that has been learned and absorbed needs to be screened based on "organizational restructuring" before it can be applied. For decoration company, this ability is mainly reflected in the rapid application of new technologies and concepts related to projects in their practices and processes. Therefore, combining these similar concepts, and drawing on the measurement method of knowledge application ability in Choi et al.'s (2010) research, this study proposes a measurement scale for the acquisition ability of decoration enterprises based on the actual situation of decoration enterprises and decoration industry, as shown in Table 4.3.

Constructs and variables		Items	Reference	
	1.	Companies can obtain external knowledge and information through multiple channels.	Paker and	
The learning and absorption ability of decoration	2.	The company encourages employees to continuously learn digital technologies and knowledge related to the construction industry.	Sinkula (1999b)	
enterprises	3.	The company encourages employees to exchange project management experience/work skills and other knowledge with each other.	(2005)	
The knowledge	1.	The company can timely implement new concepts of green/energy-saving development from the construction industry.		
application ability of decoration enterprises	2.	The company can quickly and effectively apply new digital construction techniques/plans/methods to actual projects.	Choi et al. (2010)	
	3.	Company employees are able to effectively apply previous project experience to new projects.		

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(4) Restructuring capability

Restructure is a process of continuous practice, and trial and error in which a company takes various planned or unplanned actions, ultimately choosing a transformation path that matches the company's context and complementary resources. Zahra et al. (2006) pointed out that trial and error are related to the learning mechanism that enterprises need to promote in the future. In order to successfully implement trial and error behavior, enterprises must establish certain capabilities, pay a certain amount of time and cost, and make the relevant information of trial and error the focus of their next decision-making.

After a series of trial-and-error matching behaviors, the operation processes and practices of decoration enterprises will gradually become stable, so the trial-and-error matching ability will inevitably decline after the formation of the practices. Before that, this ability largely determines whether the new path of enterprises can bring stable digital transformation to enterprises. The reason that restructure and trial and error are put together in this study for the two are inseparable. If there are no trial and error, restructure has no rules to follow.

Taking a closer look, trial and error restructure emphasizes two practical meanings. One is the understanding of the development context and new path plans of the decoration enterprise itself involves the concept of organizational innovation.

The other layer is reconstruction, which involves the initial integration and reset of decorative enterprise resources, as well as the release of redundant resources. For decoration companies, their trial-and-error behaviors generally occur at the project level, making a certain contribution to the enrichment of the decoration enterprise's knowledge base, including technological exploration, experience formation.

The matching process has a greater impact on the decoration enterprise strategy. If a company would like to draw up strategic path of restructuring for the actual situation of the enterprise, then it can be achieved only through integration of project level knowledge base and the understanding of the enterprise's own situation, such as business diversification, scientific and technological innovation. The measurement of this matching has long been mentioned in Kaplan and Norton's research (1996). Therefore, this study focuses on the measurement of similar constructs in Kaplan and Norton's research (1996).

In order to ensure the perception and judgment, learning and absorption, knowledge application, and organizational restructuring of decoration enterprises, they must have sufficient flexibility and resilience to transform their strategic paths according to time and place. Strategic flexibility reflects the crisis management ability of decoration enterprises, especially for traditional decoration enterprises, whose original competitive advantage lies in construction contracting projects. With the mainstream of funded and comprehensive contracting projects, how to enhance strategic foresight and adaptability, quickly achieve transformation and upgrading, tests the strategic flexibility ability of decoration enterprises.

Regarding the measurement of strategic flexibility capability, L. G. Liu et al. (2009) divided it into four dimensions: environmental scanning, information analysis, dynamic matching, and strategic control, while J. Li (2009) divided it into five dimensions: organizational flexibility, resource flexibility, cultural flexibility, process flexibility, and technological flexibility. However, most studies measure strategic flexibility as a single dimensional variable, use four items: work flexibility, work mode freedom, communication channel smoothness, and strategic transformation speed. Based on the actual situation and characteristics of decoration enterprises, a measurement scale for trial-and-error matching ability and strategic flexibility ability is compiled, as shown in Table 4.4.

Constructs and variables		Items	Reference
Trial and error matching ability of decoration enterprises	1. 2.	In response to the opportunities and challenges from the construction market, the company is always able to develop accurate reform plans. The organizational structure, workflow, and business model of the company can be matched with the company's development strategy.	Kaplan and Norton (1996)
_	3.	The company has a good understanding of its own development status.	
The strategic flexibility capability of decoration enterprises	1. 2. 3.	The company allows each department to have the freedom to manage and work content. The project department and subsidiaries of the company have significant decision-making autonomy. The company establishes an efficient and smooth organizational structure, workflow, and timely adjusts business models in response to changes in the construction market.	Liao and Marsillac (2015)

Table 4.4 Scale for organizational restructuring of decoration enterprises

(5) Organizational performance

In the literature on organizational performance, there are indicators such as asset return and sales growth (Narver & Slater, 1990), market share and overall performance, and customer loyalty. This section adopts a combination of subjective indicators, financial and non-financial performance indicators for measurement.

Firstly, based on the following reasons, this research intends to use subjective indicators of self-evaluation to measure enterprise performance.

On one side, managers may not be willing to disclose specific numbers of company performance based on commercial sensitivity or confidentiality considerations, and anonymously filling out questionnaires can also create difficulties in obtaining objective information (Dess & Beard, 1984). Secondly, in the study of cross industry profit performance, subjective indicators are more applicable than objective indicators. This is because the profit levels of different industries vary, and using objective indicators may confuse their respective variables with enterprise performance. In this case, using subjective measurement indicators makes it easier for managers to compare the performance of our company with the industry profit level.

On the other side, this section measures multiple indicators that combine financial and nonfinancial performance.

Secondly, financial performance is mainly measured by the sales growth of the company's leading products. However, performance indicators such as profits may not accurately reflect

the company's financial situation, and regardless of the differences in profits that may arise due to different accounting treatment methods. Assuming that the company is in different investment periods, the investment in organizational dynamic capabilities is large, and it mostly reflects future profits, its profitability may take a long time to be reflected in the financial statements, Therefore, referring to Baker and Sinkula (1999a), it incorporates customer satisfaction and product reputation of enterprises into non-financial indicators to reflect future performance. The measurement items are shown in Table 4.5.

Constructs and variables		Items	Reference
Organizational performance	1. 2. 3.	Sales growth of enterprise's main business Product reputation Customer satisfaction	Baker and Sinkula (1999a)

Table 4.5 Scale of organizational performance of decoration enterprises

4.1.2 Design and implementation of enterprise interviews

Interview method is one of the main research methods in management, which includes two forms: structured interview and semi-structured interview. Structured interviews are a formal standard interview format, with a formal questionnaire and a standardized interview process, aimed at conducting quantitative research. Semi structured interviews are informal forms of interviews that do not have a standard interview process. Instead, they are conducted freely according to a rough interview outline, with a flexible interview process aimed at gaining a deeper understanding of the research question through qualitative analysis.

This study will adopt a semi-structured interview method, prepare a rough interview outline in advance, and ask the interviewees questions according to their research needs. The interview outline is mainly used as a reminder. During the interview process, the interviewer encourages the interviewee to raise their own questions while also asking questions, and adjusts the interview procedure and content accordingly. In addition, accompanied by executives and other personnel in the target company, the interviewer visited the company headquarters, interior decoration site, and design institute multiple times to gain a deep understanding of the company's strategy, application of dynamic capabilities, and practical results.

1. Interview outline

The interview content includes the basic situation of the enterprise, internal and external advantageous resources of the enterprise, and the application and practice of digital technology in the enterprise. The interview adopts an open-ended style, allowing the interviewee to freely express their opinions, in order to comprehensively understand the information related to the

research content as much as possible. This method also discovers problems overlooked in the research, and broadens the research perspective, obtains preliminary confirmation and inductive convergence through interviews.

Through semi-structured interviews with senior managers and employees, we have gained a comprehensive understanding of the company's development process, as well as its views and insights on the connotations and relationships of variables such as environmental perception, organizational learning, and organizational restructuring. We have preliminarily determined the relationships between these variables and evaluated the rationality of the theoretical model. In addition, complement and verify with the survey questionnaire.

2. Interview implementation

This study conducted semi-structured interviews through face-to-face, video, and direct telephone conversations, and recorded the interview to facilitate the subsequent process of organizing data and supplementing information that was not captured at the interview site. In order to ensure sufficient access to interview data and avoid rejection and negative response behaviors caused by prolonged time, this study limits each interview to one hour. The following text will briefly introduce the implementation process of the interview, including three parts: pre-interview, interview, and post-interview.

Prior to the interview, the researcher firstly set up an interview outline closely around the research question, repeatedly consider the rationality of the interview outline, and avoid the interview question involving confidential information of the enterprise. Second, the researcher invites two scholars in the field of strategic management to evaluate the interview outline and provide opinions and suggestions. Select one interviewee for a pre-interview, estimate the interview time and effectiveness, and further revise the research outline. Third, the researcher selects and contacts interviewees who are willing to be interviewed, briefly introduce the purpose, content, and duration of the interview, and agree on the interview method, location, and time with the interviewees. Fourth, we prepare interview materials, including interview outlines, notebooks, signature pens, and recording device, and seek advice from experienced scholars on interview techniques.

At the interview, we firstly provide the interviewee with a detailed introduction to the purpose, main content, and research significance of this interview, as well as the confidentiality, and obtain the interviewee's consent regarding the recording. We emphasize that interview information is only used for academic research, create a relaxed atmosphere, guide respondents to answer interview questions truthfully and objectively, and strive for active cooperation from respondents to ensure the effectiveness of the interview.

Secondly, we flexibly ask questions based on the interview outline, give the interviewees sufficient time to think, allow them to elaborate more on their opinions, and deeply exchange their viewpoints.

Thirdly, we based on the feedback from the research subjects, adjust the research outline and the way questions are raised in a timely manner to obtain detailed and authentic information as much as possible.

Fourthly, we make detailed records of the interview content, capture key information, and for face-to-face interviews, pay attention to all the information displayed by the interviewee's actions, expressions, behaviors, emotions, and micro expressions.

After the interview, we keep in touch with the interviewees, promptly supplement vague information in the subsequent process, summarize and analyze key information.

4.1.3 Data collection and questionnaire validity analysis

1. Data collection

a. Main survey subjects.

Based on the three stages of Fengyun Technology's dynamic transformation (the first stage in 2008-2015, the second stage in 2016-2018, and the third stage in 2019-2023), the researcher designed three online survey questionnaires using an online survey, with one questionnaire for each stage. Applicants were asked to choose one, two, or three questionnaires based on their different start times. With the support of the company president, the administrative department cooperated with this data collection. They sent a roster to the researcher on all employees as of 30 April 2023, which indicated: name, department (or branch, subsidiary), position, date of employment, gender, 131 employees in total.

After careful discussion with the administrative head, the researcher mainly selected 58 people above the level of deputy department manager, as well as 12 designers and engineers who have been employed for a relatively long time and their positions are related to several transformations. A total of 70 in-service personnel were selected for the survey.

b. Distribution and collection of questionnaires.

The specific operation process of the survey is as follows:

Step 1: Randomly select 10 employees to WeChat group from the poll of 70 people, send three questionnaires to the WeChat group, explain the filling rules. Only 6 members completed the questionnaire in two days;

Step 2: Based on the experience of filling in the first step, it is known that if a WeChat group of 70 people is added at the same time, it is estimated that the proportion of people filling

in will not be large. Therefore, the researcher discussed with the head of the administrative department to adopt a small group system, which is to add a total of 7 groups, each with 10 people, numbered as Group 1 to 7. The groups that have already been filled in the first step will be coded as Group 1, and sent to each group in chronological order for everyone to fill in.

Due to the lag between the filling process and the survey statistical data, waiting for one group to have no more data added within a day before proceeding with the distribution of the next group can ensure that at least 80% of people complete the questionnaire filling. The time it takes for different groups to reach 8 or more people varies from 1 day to 3 days, and with the period for each group, it took 22 days for 7 groups to complete questionnaires.

Step 3: After each group fills in 80% of the survey, a request for assistance in filling out the questionnaire is made again in each group. According to the average completion time of the first round of filling, which is 2 days, data collection will end 2 days after the last request is sent. The statistical data shows a total of 62 people filling out the questionnaire. Among them, 38 people filled out the first stage (2008-2015) questionnaire; 52 people filled out the second stage (2016-2018) questionnaire; 62 people filled out the third stage (2019-2023) questionnaire, with a filling rate of 88.5%.

According to the initial analysis of the questionnaire design, all employees who fill out the questionnaire in the first stage will go through the second and third stages, and those who go through the second stage will go through the third stage. Therefore, 38 people, 52 people, and 62 people are acceptable, which is equivalent to the entry time of 70 people selected from the roster provided by the administrative department.

2. Questionnaire validity analysis

From the perspective of decoration enterprises, this study proposes that dynamic capabilities of enterprises should have three dimensions, and further based on the research results of domestic and foreign scholars, a total of 24 measurement items on variables, such as dynamic capabilities and environmental uncertainty of decoration enterprises were designed. Although there is sufficient theoretical basis, the actual effectiveness of their application to decoration enterprises needs to be discussed. Therefore, it is necessary to conduct validity tests on the questionnaire and data collected in this study.

3. Reliability analysis

Reliability, which refers to the degree of consistency or reliability of measurement results, is often represented by internal consistency. The basic logic of its verification is that multiple observation variables in the scale design should highly reflect the same factor within the model to ensure the reliability of the measurement.

Currently, scholars generally rely more on Cronbach's α to measure the corrected item total correlation (CITC) as two indicators. At the same time, scholars have adopted the approach of deleting the item after α . The method of value is used to confirm the reliability of the measurement model and its scale. Reliability analysis is used to study the reliability and accuracy of answers to quantitative data, especially attitude scale questions. The researcher utilizes SPSSAU (2023) (Version 23.0), an online application. Statistical analysis software was used in this study to conduct reliability analysis on the measurement scales of sustained competitive advantage, path dependence, perceptual judgement ability, learning absorption ability, knowledge application ability, environmental uncertainty, organizational restructuring ability, strategic flexibility ability, and organizational performance variables of Fengyun Technology in three stages.

Firstly, the researcher analyzes α if the coefficient is higher than 0.8, it indicates high reliability. If this value is between 0.7 and 0.8, it indicates good reliability. If value is between 0.6 and 0.7, it indicates acceptable reliability. If value below 0.6, it indicates poor reliability.

Secondly, if the CITC value is below 0.3, it can be considered to be deleted.

Thirdly, if the item has been deleted α , the coefficient value is significantly higher than α , the coefficient can be considered to be deleted and reanalyzed at this time.

Fourth: Summarize the analysis.

Through reliability analysis of measurement models for sustained competitive advantage, path dependence characteristics, and several dimensions of capability, Table 4.6 shows that the reliability coefficient value is 0.985 of measurement scales for variables related to Fengyun in traditional decoration period. The value is greater than 0.9, indicating that the reliability quality of the research data is very high.

For Cronbach's α if item deleted, if the company's organizational governance and structure remains the same to be deleted, the reliability coefficient will significantly increase. Therefore, it can be considered to be modified or deleted. The operating methods of a company generally follow past habits without significant changes. If it was deleted, the reliability coefficient will increase significantly. Therefore, it may be considered to modify or delete this item. If the business scope of the company is basically fixed and deleted, the reliability coefficient will increase significantly.

Table 4.6 Reliability test results o	f measuremen	t scales for va	riables related	to Fengyun						
	Fengyun in Traditional Decoration Period			Fengy Ex	un in Transfor ploration Per	rmation iod	Fengyun	Fengyun in Development Period		
Description	Corrected Item-Total Correlation (CITC)	Cronbach's Alpha if Item Deleted	Cronbach's α	Corrected Item-Total Correlation (CITC)	Cronbach's Alpha if Item Deleted	Cronbach's α	Corrected Item-Total Correlation (CITC)	Cronbach's Alpha if Item Deleted	Cronbach's α	
Fast growth in operating revenue.	0.905	0.982		0.87	0.968		0.762	0.961		
High operating profit margin. High brand influence.	0.863 0.923	0.982 0.982		0.685 0.678	0.97 0.97		0.62 0.696	0.963 0.962		
governance and structure remain basically unchanged.	0.462	0.984		0.572	0.972		0.407	0.965		
The company's operating methods generally follow past habits and not changed much.	0.18	0.986		0.421	0.973		0.251	0.966		
The company business scope is basically fixed and unchanged.	0.227	0.986		0.447	0.974		0.133	0.97		
competitor information and respond quickly.	0.928	0.982	0.983	0.822	0.969	0.971	0.87	0.96	0.963	
The company can invest more resources and time to obtain market information (such as construction project bidding information) and make quick decisions to seize market	0.928	0.981		0.853	0.969		0.857	0.96		
opportunities. The company can timely understand the development trends of new technologies/ construction processes/digital technologies in the market and quickly take initiative to learn.	0.903	0.982		0.86	0.969		0.863	0.96		

Fengvun i	n Traditional I	Decoration	Fengvi	un in Transfor	mation	Fengyun in Development Period		
	Period		Ex	ploration Peri	iod			
Corrected	Cronbach's		Corrected	Cronbach's		Corrected	Cronbach's	
Item-Total	Alpha if	Cronbach's	Item-Total	Alpha if	Cronbach's	Item-Total	Alpha if	Cronbach's
Correlation	Item	α	Correlation	Item	α	Correlation	Item	α
(CITC)	Deleted		(CITC)	Deleted		(CITC)	Deleted	
0.898	0.982		0.795	0.969		0.823	0.96	
0.897	0.982		0.82	0.969		0.807	0.961	
0.804	0.082		0 783	0.060		0 772	0.061	
0.894	0.982		0.785	0.909		0.772	0.901	
0.878	0.982		0.868	0.969		0.784	0.961	
0.86	0.082		0.824	0.060		0.78	0.061	
0.80	0.982		0.634	0.909		0.78	0.901	
0.869	0.982		0.726	0.97		0.825	0.961	
0.926	0.982		0.897	0.968		0.769	0.961	
	Fengyun i Corrected Item-Total Correlation (CITC) 0.898 0.897 0.894 0.878 0.878 0.86 0.869 0.869	Fengyun : Traditional I PeriodCorrected Item-Total Correlation (CITC)Cronbach's Alpha if Item Deleted0.8980.9820.8970.9820.8940.9820.8780.9820.8690.9820.8690.9820.9260.982	Fengyun i Traditional Decoration PeriodCorrected Item-Total (CITC)Cronbach's Alpha if DeletedCronbach's α0.8980.9820.8970.9820.8970.9820.9820.9820.8780.9820.9820.9820.8690.9820.9820.9820.8690.9820.9820.9820.9260.9820.9820.982	Fengyun in Traditional Decoration PeriodFengyu Ex Corrected Item-Total Correlation (CITC)Fengyu Ex Corrected Item-Total Correlation (CITC)0.8980.9820.7950.8970.9820.8220.8940.9820.7830.8680.9820.8680.8690.9820.8340.9260.9820.726	Fengyun in Traditional Decoration PeriodFengyun in Transfor Exploration Per CorrectedCorrectedCronbach's Item-TotalCornebach's Alpha if Correlation (CITC)Cornebach's DeletedCornebach's Item-Total (CITC)0.8980.9820.7950.9690.8970.9820.820.7830.8940.9820.7830.9690.8660.9820.8340.9690.8660.9820.8340.9690.8690.9820.7260.970.9260.9820.8970.968	Fengyun in Traditional Decoration PeriodFengyun in Transformation Exploration PeriodCorrected Item-Total (CITC)Cronbach's Item DeletedCorrected Correlation (CITC)Cronbach's Correlation (CITC)0.8980.9820.7950.9690.8970.9820.7830.9690.8940.9820.7830.9690.8950.9820.7830.9690.8960.9820.8680.9690.8970.9820.8680.9690.8960.9820.8680.9690.8970.9820.8340.9690.8690.9820.8340.9690.8690.9820.8970.968	Fengyun in Traditional Decoration PeriodFengyun in Transformation Exploration PeriodFengyun GorrectedCorrected Item-TotalAlpha if Alpha if CornelationCronbach's Item-TotalCorrected Alpha if CornelationCorrected CornelationCorrected Cornelation0.8980.9820.7950.9690.8230.8970.9820.8220.9690.8070.8940.9820.7830.9690.7720.8780.9820.8680.9690.7840.8690.9820.8240.8260.970.8690.9820.7260.970.8250.9260.9820.8970.9680.769	Fengyun in Traditional Decoration PeriodFengyun in Transformation Exploration PeriodFengyun in Developme CorrectedCorrected Corrobach's Item-TotalCornobach's ItemCorrelation CorrelationCorrected CorrelationCorrected CorrelationCorrected CorrelationCorrelation Item CorrelationCorrelation Item CorrelationCorrelation Rem <b< td=""></b<>

Digital Transformation in Chinese Decoration Industry: A Dynamic Capabilities Perspective

	Fengyun in Traditional Decoration Period			Fengy	un in Transfor	mation od	Fengyun in Development Period		
Description	Corrected Item-Total Correlation (CITC)	Cronbach's Alpha if Item Deleted	Cronbach's α	Corrected Item-Total Correlation (CITC)	Cronbach's Alpha if Item Deleted	Cronbach's α	Corrected Item-Total Correlation (CITC)	Cronbach's Alpha if Item Deleted	Cronbach's α
The organizational structure, workflow, and business model of the company is matching with the company's development strategy.	0.962	0.981		0.914	0.968		0.901	0.96	
The company has good understanding of its own development status.	0.936	0.981		0.88	0.969		0.869	0.96	
The company allows each department to have the freedom to manage and work content.	0.963	0.981		0.862	0.969		0.801	0.961	
The project department and subsidiaries have significant decision-making autonomy.	0.936	0.981		0.736	0.97		0.68	0.962	
The company establishes an efficient and smooth organizational structure, workflow, and timely adjusts business models in response to changes in the market.	0.931	0.981		0.843	0.969		0.873	0.96	
Sales growth in company's main business.	0.918	0.982		0.92	0.968		0.888	0.96	
Product reputation. Customer satisfaction.	0.944 0.927 Standardize	0.981 0.982 d Cronbach α	coefficient:	0.872 0.907 Standardize	0.969 0.968 d Cronbach α	coefficient:	0.873 0.887 Standardize	0.96 0.96 ed Cronbach α	coefficient:
		0.983			0.977			0.969	

Digital Transformation in Chinese Decoration Industry: A Dynamic Capabilities Perspective

Regarding the CITC value, as the company's operating methods generally follow past habits with little change, the corresponding CITC value is less than 0.2, indicating a weak relationship with other analysis items. It can be considered to delete it (if it is a predictive analysis, this item can be corrected before collecting formal data). The CITC value corresponding to the basically fixed and unchanging business areas of the company ranges from 0.2 to 0.3, indicating weak correlation with other analysis items. If it is a predictive analysis, it can be corrected for this item before collecting formal data (if it is a predictive analysis, it can be considered to be deleted). In summary, the reliability coefficient value of the research data is higher than 0.9, indicating that the data has high reliability quality and can be used for further analysis.

The reliability test results of the measurement scale for variables related to the transformation exploration period of Fengyun show that the reliability coefficient value is 0.972, which is greater than 0.9, indicating that the reliability quality of the research data is very high.

For Cronbach's α if item deleted, if the company's organizational governance and structure remains the same to be deleted, the reliability coefficient will significantly increase. Therefore, it can be considered to be modified or deleted. The item operating methods of a company generally follow past habits without significant changes, if this to be deleted, the reliability coefficient will increase significantly. Therefore, it may be considered to modify or delete this item. If the item the business scope of the company is basically fixed to be deleted, the reliability coefficient will increase significantly. Therefore, it can be considered to modify or delete this item. Regarding the CITC value, the CITC values of the analysis items are all greater than 0.4, indicating a good correlation between the analysis items and a good level of reliability. In summary, the reliability coefficient value of the research data is higher than 0.9, indicating that the data has high reliability quality and can be used for further analysis.

The reliability test results of the measurement scale for variables related to the digital development period of Fengyun, indicate that the reliability coefficient value is 0.968, which is greater than 0.9, indicating that the reliability quality of the research data is very high.

Regarding the CITC value, the company's operating methods generally follow past habits with little change. The corresponding CITC value ranges from 0.2 to 0.3, indicating a weak correlation with other analysis items. If it is a predictive analysis, this item can be corrected before collecting formal data (if it is a formal data analysis, it can be considered to be deleted). Due to the fact that the CITC value corresponding to the company's business field is relatively fixed and unchanged, which is less than 0.2, it indicates that its relationship with other analysis items is weak. Therefore, deletion processing can be considered (if it is a predictive analysis, it
can be corrected for this item before collecting formal data). In summary, the reliability coefficient value of the research data is higher than 0.9, indicating that the data has high reliability quality and can be used for further analysis.

b. Validity analysis

Validity, also known as the validity of a scale, specifically refers to the accuracy of the measurement scale in reflecting the potential variables being measured. It is generally measured using two indicators: content validity and construct validity. The scale used in this study serves to verify the hypothesis relationship proposed in this study, and the relationship assumptions of the theoretical constructs involved are based on rigorous theoretical derivation.

1) Content validity testing process

Content validity is a measure of whether the content expressed in a measurement scale can comprehensively and effectively cover the validity level of corresponding construct features. Therefore, it mainly starts from the content of the scale itself to examine whether the development process of the scale has a solid theoretical foundation. In the questionnaire design process of this study, firstly, we mainly drew on authoritative and widely cited academic paper related scales from abroad. In order to better target the characteristics of decoration enterprises, we specifically selected articles on the dynamic capabilities of construction decoration enterprises and the impact of uncertain environments on decoration enterprises for citation. Secondly, for the design of each construct subscale, this study refers to no more than 2 mature academic articles for citation without item-by-item reference, which ensures that the scale itself has high content validity. Once again, after completing the scale design, we had sufficient communication with the teachers and doctoral students of the research team, as well as in-depth interviews and pre-tests with senior management personnel of the decoration enterprise. During this process, the questionnaire underwent a total of 5 rounds of refinement and modification, resulting in the final draft of the questionnaire. Through the above questionnaire design process, it can be ensured that the measurement scale of this study has high content validity.

2) Factor loading coefficient

The correlation between factor loading coefficient values and analysis items (latent variables/measurement items).

Firstly, standard load coefficient values are usually used to represent the correlation between factors and analysis items (measurement items).

Secondly, if a certain item shows significance and the standard load coefficient value is greater than 0.7, it indicates a strong correlation;

Thirdly, if a certain item does not show significance, or if the standard load coefficient

value is low (such as below 0.4), it indicates a weak relationship between the item and the factor, and it can be considered to remove the item.

3) Structural validity testing process

AVE (Average Variance Extraction) and CR (Combined Reliability) are used for convergent validity analysis;

Firstly, in general, if the AVE is greater than 0.5 and the CR value is greater than 0.7, it indicates a high convergent validity;

Secondly, if the AVE or CR values are low, it may be considered to remove a certain factor and reanalyze the aggregated validity;

Thirdly, the calculation formula is as follows: AVE value=Average (loading squared and then summed), CR value=Sum (loading)^2/[sum (loading)^2+sum \in], loading value is the standardized load factor, and e is the residual standard load factor.

4) Validity analysis of various dimensions of dynamic capabilities in decoration enterprises.

From the perspective of the previous text, by constructing and verifying the dynamic capability system of decoration enterprises, this study believes that the dynamic capability of decoration enterprises should include five dimensions of capabilities: perception and judgement ability, learning and absorption ability, knowledge application ability, organizational restructure ability, and strategic flexibility ability. In the theoretical research section, it can be seen that each of the five dimensions of ability has its own emphasis, forming a dynamic ability system. Based on the relevant assumptions mentioned earlier, SPSSAU must first be used to conduct confirmatory factor analysis on each dimension to test its validity.

In the traditional decoration stage, the validity measurement results of SPAAUA on the dynamic capabilities of various dimensions of Fengyun Technology are shown in the table. Table 4.7 shows that for each measurement relationship, the absolute values of the standardized load system are all greater than 0.6 and show significance, indicating a good measurement relationship. This study conducted confirmatory factor analysis (CFA) on a total of 5 factors and 15 analysis items. The AVE values corresponding to a total of 5 factors are all greater than 0.5, and the CR values are all higher than 0.7, indicating that the data analyzed in this study has good convergent validity.

In the transformation exploration period, the table of SPAAUA's validity measurement results for various dimensions of dynamic capabilities of Fengyun Technology shows that for each measurement relationship, the absolute values of the standardized load series are all greater than 0.6 and show significance, indicating a good measurement relationship. This confirmatory factor analysis (CFA) was conducted on a total of 5 factors and 15 analysis items. The AVE

values for all 5 factors were greater than 0.5, and the CR values were all higher than 0.7, indicating that the data in this analysis has good convergent validity.

In the development period, the validity measurement results of SPAAUA on the dynamic capabilities of various dimensions of Fengyun Technology, in terms of measurement relationships, the absolute values of standardized load series are all greater than 0.6 and show significance, indicating a good measurement relationship. This study conducted confirmatory factor analysis (CFA) on a total of 5 factors and 15 analysis items. The AVE values corresponding to the 5 factors are all greater than 0.5, and the CR values are all higher than 0.7, indicating that the data analyzed in this study has good convergent validity.

The research background of this section is the transformation and upgrading process of decoration enterprises from the perspective of dynamic capabilities. Unlike previous studies on transformation and upgrading that have mostly focused on state-owned enterprises or large leading enterprises, this section of the study focuses on the transformation and upgrading process of a private decoration enterprise. In fact, the business situation of private decoration company is very severe. Although private enterprises have the advantages of higher flexibility and stronger innovation ability compared to state-owned decoration enterprises and large top enterprises, they are usually relatively short of funds and have weaker financial strength. They often need to raise funds through bank loans and other means. Compared to state-owned enterprises and large leading enterprises, private decoration companies are relatively lacking in government support policies, and have relatively fewer opportunities to obtain government support for resources, projects, and other aspects. Relatively insufficient technology and talent reserves may affect their position in competition and future development. Private decoration enterprises are facing increasingly fierce market competition, which poses risks and challenges to their growth and survival. Therefore, private decoration enterprises also need to undergo transformation and upgrading to overcome the long-term difficulties that have hindered their development, achieve sustainable development, and better play their due role in the national economy. Seizing the opportunity to actively promote the transformation and upgrading of private decoration enterprises has gradually become a common consensus.

Table 4.7 F	actor loading coefficient	values, showing th	he correlation between factors (latent variables)) and analysis items	s (manifest variable/measured item	s)
	8	, 0		,	, , , , , , , , , , , , , , , , , , , ,		

	-	Trac	litional	Decoration	on]	Period	Transf	ormatio	n Explor	atic	on Period		Develo	pment Pe	erio	d
Factor (latent variables)	Measured items (Manifest Variable)	Un-std. factor loading (Coef.)	Std. Error	z (CR value)	p	Std. factor loading (Std. Estimate)	Un-std. factor loading (Coef.)	Std. Error	z (CR value)	p	Std. factor loading (Std. Estimate)	Un-std. factor loading (Coef.)	Std. Error	z (CR value)	p	Std. factor loading (Std. Estimate)
	The company can timely grasp competitor information and respond quickly. The company can	1	-	-	-	0.949	1	-	-	-	0.866	1	-	-	-	0.938
Perceived judgment ability	invest more resources and time to obtain market information and make quick decisions to seize opportunities.	1.169	0.082	14.276	0	0.969	0.877	0.092	9.558	0	0.91	0.827	0.076	10.82	0	0.859
	timely understand the development trends of new technologies / construction processes / digital technologies in the market and quickly take initiative to learn.	1.155	0.087	13.226	0	0.955	1.04	0.108	9.655	0	0.914	1.033	0.073	14.218	0	0.94

		Trac	litional	Decorati	on l	Period	Transf	ormatio	n Explor	atio	on Period		Develo	pment Pe	erio	d
Factor	Massurad itams	Un-std.				Std. factor	Un-std.		•		Std. factor	Un-std.				Std. factor
(latent variables)	(Manifest Variable)	factor loading	Std. Error	z (CR value)	р	loading (Std.	factor loading	Std. Error	z (CR value)	р	loading (Std.	factor loading	Std. Error	z (CR value)	р	loading (Std.
	·	(Coef.)				Estimate)	(Coef.)				Estimate)	(Coef.)				Estimate)
	The company can obtain external knowledge and information through multiple channels.	1	-	-	-	0.961	1	-	-	-	0.722	1	-	-	-	0.848
Learning absorption ability	The company encourages employees to continuously learn digital technologies and knowledge related to the industry.	1.013	0.069	14.613	0	0.966	1.149	0.157	7.314	0	0.99	1.074	0.092	11.685	0	0.985
	The company can quickly and effectively apply new digital construction techniques / plans / methods to projects.	0.804	0.094	8.524	0	0.84	1.15	0.163	7.066	0	0.95	1.016	0.096	10.555	0	0.932

Digital Transformation in Chinese Decoration Industry: A Dynamic Capabilities Perspective

		Trac	litional	Decoratio	on l	Period	Transf	ormatio	n Explor	atio	on Period		Develo	pment P	erio	od
Factor (latent variables)	Measured items (Manifest Variable)	Un-std. factor loading (Coef.)	Std. Error	z (CR value)	р	Std. factor loading (Std. Estimate)	Un-std. factor loading (Coef.)	Std. Error	z (CR value)	р	Std. factor loading (Std. Estimate)	Un-std. factor loading (Coef.)	Std. Error	z (CR value)	р	Std. factor loading (Std. Estimate)
	The company can timely implement scientific and high- quality new digital development concepts in the industry. The company can	1	-	-	-	0.972	1	-	-	_	0.988	1	-	-	_	0.859
Knowledge application ability	quickly and effectively apply new digital construction techniques / plans / methods to projects.	0.959	0.068	14.116	0	0.943	1.035	0.063	16.441	0	0.934	0.992	0.111	8.903	0	0.856
	Employees are able to effectively apply project experience to new projects.	0.969	0.064	15.096	0	0.954	0.766	0.07	10.95	0	0.849	0.999	0.098	10.236	0	0.922

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	Trac	litional	Decoration	on l	Period	Transf	ormatio	n Explor	atic	on Period		Develop	pment Pe	erio	d
Magguraditama	Un-std.				Std. factor	Un-std.				Std. factor	Un-std.				Std. factor
Measured hems	factor	Std.	z (CR		loading	factor	Std.	z (CR		loading	factor	Std.	z (CR		loading
(Mannest variable)	loading	Error	value)	p	(Std.	loading	Error	value)	p	(Std.	loading	Error	value)	р	(Std.
	(Coef.)		,		Estimate)	(Coef.)		,		Estimate)	(Coef.)		,		Estimate)
In response to the	· · · · · ·					· · ·									· · · · ·
opportunities and															
challenges from the															
construction															
market, the	1	-	-	_	0.98	1	-	-	-	0.934	1	-	-	-	0.845
company is always															
able to develop															
accurate reform															
plans.															
The organizational															
structure,															
workflow, and															
business model of															
the company can	0.93	0.052	17.821	0	0.963	0.968	0.072	13.491	0	0.943	1.075	0.106	10.109	0	0.918
match with the															
company's															
development															
strategy.															
The company has a															
good understanding															
of its own	1.027 0.03	0.037	7 27.405	0	0.995	0.921	0.074	12.451	0	0.923	1.168	0.106	11.048	0	0.959
development status.															
	Measured items (Manifest Variable) In response to the opportunities and challenges from the construction market, the company is always able to develop accurate reform plans. The organizational structure, workflow, and business model of the company can match with the company's development strategy. The company has a good understanding of its own development status.	Measured items (Manifest Variable)Tract Un-std. factor loading (Coef.)In response to the opportunities and challenges from the construction market, the1company is always able to develop accurate reform plans.1The organizational structure, workflow, and business model of the company can match with the company's development strategy.0.93The company has a good understanding of its own development stratus.1.027	Measured items (Manifest Variable)Traditional 1 Un-std. factorMeasured items (Manifest Variable)Un-std. factorStd. loading (Coef.)In response to the opportunities and challenges from the construction market, theI-company is always able to develop accurate reform plans. The organizational structure, workflow, and business model of the company can match with the company's development strategy. The company has a good understanding of its own development status.I-In response to the opportunities and challenges from the construction market, the1-0.0370.037-	Measured items (Manifest Variable)Traditional Decoration Un-std. factorStd. z (CR value) (Coef.)In response to the opportunities and challenges from the construction market, the $ -$ company is always able to develop accurate reform plans. The organizational structure, workflow, and business model of the company can match with the company's development strategy. $ -$ 0.930.05217.821match with the company has a good understanding of its own development status. 1.027 0.037 27.405	$\begin{array}{c c c c c c } & & & & & & & & & & & & & & & & & & &$	$\begin{array}{c c c c c c } \mbox{Measured items} & Traditional Decoration Period \\ \mbox{Un-std.} & Std. & z (CR & p & loading \\ loading & Error & value) & p & loading \\ (Coef.) & & & & & & \\ \mbox{opportunities and } & & & & & & \\ \mbox{challenges from the } & & & & & & \\ \mbox{company is always } & & & & & & \\ \mbox{able to develop } & & & & & & \\ \mbox{accurate reform } & & & & & & \\ \mbox{plans.} & & & & & & & \\ \mbox{The organizational structure, } & & & & & & & \\ \mbox{workflow, and } & & & & & & & \\ \mbox{business model of } & & & & & & & \\ \mbox{the company 's } & & & & & & & \\ \mbox{development strategy.} & & & & & & & & \\ \mbox{The company has a } & & & & \\ \mbox{good understanding } & & & & \\ \mbox{development status.} & & & & & \\ \mbox{1.027} & 0.037 & 27.405 & 0 & 0.995 \\ \end{array}$	$ \begin{array}{c ccccc} \mbox{Measured items} \\ \mbox{(Manifest Variable)} & \hline Traditional Decoration Period Transformation (Manifest Variable) & \hline Un-std. \\ \mbox{factor Std. } z (CR) \\ \mbox{loading Error value) } p & \hline loading factor \\ \mbox{loading (Coef.)} & & value) & p & \hline loading (Std. & loading (Coef.) \\ \hline In response to the \\ \mbox{opportunities and challenges from the construction \\ market, the 1 & 0.98 & 1 \\ \mbox{company is always able to develop } \\ \mbox{accurate reform } \\ \mbox{plans.} \\ The organizational \\ \mbox{structure, } \\ \mbox{workflow, and } \\ \mbox{business model of } \\ \mbox{the company can } \\ \mbox{match with the } \\ \mbox{company's } \\ \mbox{development } \\ \mbox{strategy.} \\ The company has a \\ \mbox{good understanding } \\ \mbox{of its own } \\ \mbox{development status.} \\ \hline 1.027 & 0.037 & 27.405 & 0 \\ \hline \mbox{opsilon 0.995 } \\ \mbox{opsilon 0.921 } \\ \m$	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Measured items (Manifest Variable)Traditional Decoration PeriodTransformation Explor Un-std.Measured items (Manifest Variable)Std. z (CR factorStd. z (CR ploading (Std.factorStd. z (CR loadingIn response to the opportunities and challenges from the construction market, the10.98110.981company is always able to develop accurate reform plans. The organizational structure, workflow, and business model of the company can good understanding of its own0.930.05217.82100.9630.9680.07213.4911.0270.03727.40500.9950.9210.07412.451	$ \begin{array}{c cccc} \mbox{Measured items} (Manifest Variable) & \hline Traditional Decoration Period & Transformation Exploration (Manifest Variable) & Traditional Decoration Period & Transformation Exploration (Manifest Variable) & Traditional Decoration (Manifest Variable) & Traditional Decoration (Manifest Variable) & Traditional Decoration (Manifest Variable) & Traditional (Tabular) & Traditional $	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Traditional Decoration PeriodTransformation Exploration PeriodDevelopment PeriodMeasured items (Manifest Variable)Un-std. factorStd. z (CR value)Std. factorUn-std. (Std. loading Error value)Std. z (CR (Std. loading Error value)Std. z (CR (Std. loading Error value)Development Period (Std. z (CR (Std. loading Error value)Std. z (CR (Std. loading Error value)Std. z (CR (Std. loading Error value)Std. z (CR (Std. loading Error value)Std. z (CR (Coef.)Std. z (CR (Coef.)Std. z (CR Error value)Std. z (CR (Coef.)Std. z (CR (

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		Trac	litional	Decorati	on l	Period	Transf	ormatio	n Explor	atic	on Period		Develop	pment Pe	erio	d
Factor (latent variables)	Measured items (Manifest Variable)	Un-std. factor loading	Std. Error	z (CR value)	p	Std. factor loading (Std.	Un-std. factor loading	Std. Error	z (CR value)	р	Std. factor loading (Std.	Un-std. factor loading	Std. Error	z (CR value)	р	Std. factor loading (Std.
	The company	(Coef.)				Estimate)	(Coef.)				Estimate)	(Coef.)				Estimate)
	allows each department to have the freedom to manage and select work content.	1	-	-	-	0.982	1	-	-	-	0.939	1	-	-	-	0.855
Strategic flexibility capability	The project department and subsidiaries of the company have significant decision-making autonomy. The company astablishes an	1.05	0.061	17.319	0	0.958	0.823	0.132	6.229	0	0.688	0.792	0.111	7.126	0	0.745
	efficient and smooth organizational structure, workflow, and timely adjusts business models in response to changes in the market.	1.102	0.047	23.278	0	0.984	1.038	0.087	11.885	0	0.921	1.098	0.097	11.332	0	0.963

Digital Transformation in Chinese Decoration Industry: A Dynamic Capabilities Perspective

		Trac	litional	Decoratio	on l	Period	Transf	ormation	ı Explor	atic	on Period		Develo	pment P	erio	d
Factor	Measured items	Un-std.				Std. factor	Un-std.				Std. factor	Un-std.				Std. factor
(latent	(Manifest Variable)	factor	Std.	z (CR	п	loading	factor	Std.	z (CR	п	loading	factor	Std.	z (CR	п	loading
variables)	()	loading	Error	value)	Ρ	(Std.	loading	Error	value)	Ρ	(Std.	loading	Error	value)	Ρ	(Std.
,		(Coef.)				Estimate)	(Coef.)				Estimate)	(Coef.)				Estimate)
	Perceived judgment ability	1	-	-	-	0.919	1	-	-	-	0.981	1	-	-	-	0.907
	Learning absorption ability	1.12	0.143	7.809	0	0.907	0.738	0.131	5.645	0	0.885	0.866	0.119	7.297	0	0.862
Dynamic canabilities	Knowledge application ability	1.174	0.128	9.178	0	0.962	1.002	0.109	9.202	0	0.919	0.844	0.103	8.173	0	0.936
capabilities	Organizational restructuring capability	1.169	0.114	10.274	0	0.995	1.039	0.11	9.48	0	0.989	0.862	0.098	8.764	0	1
	Strategic flexibility capability	1.133	0.108	10.496	0	1	0.952	0.112	8.47	0	0.927	0.809	0.095	8.532	0	0.968

Digital Transformation in Chinese Decoration Industry: A Dynamic Capabilities Perspective

The research purpose of this section is to analyze the impact of dynamic capabilities on the performance of a Chinese private enterprise based on a case of transformation and upgrading, and to further promote the process mechanism of enterprise transformation and upgrading. The main reasons that selects Xiamen Fengyun Technology Co., Ltd. (referred to as "Fengyun Technology") as a target enterprise and vertically tracking and observing are listed below.

1. Data availability (Yin, 2004). Firstly, the researcher has the advantage of geographical proximity and close relationship with Fengyun Technology. The researcher has the opportunity to have a close understanding and observation of the company's historical development process, and it is more convenient to obtain detailed information required for case studies. The researcher can conduct comprehensive on-site interviews and questionnaire surveys with middle and senior managers and personnel from various departments, which facilitates the collection of a large amount of first-hand and second-hand data; Secondly, Fengyun Technology is a public listed company, and its financial data has undergone strict review and disclosure, with no confidentiality restrictions on data citation;

2. Case typicality (Eisenhardt, 1989). Firstly, Fengyun Technology is a regional leading enterprise in segmented industries, with moderate scale and representativeness in the industry. Secondly, the core sector of Fengyun Technology used to be a traditional decoration company, gradually transforming into a digital comprehensive service provider. It is a typical case of enterprises implementing digital decoration transformation in complex and dynamic environments. Thirdly, Fengyun Technology has seized the policy of national rural revitalization and applied digital technology to assist the development of characteristic industries, providing a series of digital comprehensive services for the positioning, interaction with customers, and promotion of the "Shaxian Snacks" brand. National leaders came to visit this model and recognized the work, and government agencies vigorously publicized and promoted this successful case.

3. Inspirational. Fengyun Technology is committed to providing a digital integration platform for various industries such as culture, art, creativity, and technology. By customizing, serving, and operating digital visualization for cities, it realizes a complete digital asset industry chain and ecosystem, and has formed two major sections of content: digital creativity and smart exhibition, and provide two comprehensive solutions, namely Digital Content Integrated Solution and Space Exhibition Integrated Solution. Since its establishment, the company has mature CG animation technology, AR/VR technology, and innovative research and development technology, and has achieved remarkable results in the fields of digital creativity, digital visualization, and digital multimedia integration. At present, the company has more than

100 software copyrights, 7 industry Grade A qualifications, and 5 invention patents. It has undergone lean improvement and gradually achieved deep business intelligence. The digital transformation process of Fengyun Technology can provide more insights for small and medium-sized decoration enterprises and reduce trial and error costs. Therefore, Fengyun Technology can provide a good research platform for this study.

The reliability and validity of the questionnaire have been tested in the previous section, and the results show that further data analysis can begin. This section will use SPSSUA statistical software to start empirical analysis, including descriptive statistical analysis, Pearson correlation analysis, and multiple linear regression analysis. It will also analyze and verify the relationships between variables, and discuss the data results.

4.1.4 Overview of interviews with Fengyun Technology

As the research deepened, the researcher conducted online surveys on 68 or more vice managers of Fengyun Technology. After completing the online data collection, a total of 10 people were interviewed, including the chairman, president, three vice presidents (one of whom also served as the general manager of the strategic operations center), board of director secretary, finance manager, design department manager, digital creative department manager, and one project manager. This practice intends to explore the digital transformation on key factors of decoration enterprises in China under dynamic capabilities, in the digital implementation process. The interview content includes the basic situation of the enterprise, the difficulties encountered in its development, and the internal and external competitive environment.

In three days before the scheduled interview, the researcher sent the outline of the interview to the interviewee through WeChat. The interview is divided into two parts based on senior and intermediate management personnel. The first part is the company's senior management personnel, including the chairman, president, executive vice president, and three vice presidents. The second part is the middle-level management personnel of the company, including the board secretary, finance department manager, digital creative department manager, design department manager, and a project manager.

The five members in the first part are the top executives of the company, all of whom have independent offices. The author conducted face-to-face interviews in their respective offices, and the interview atmosphere was relatively relaxed. The chairman, president, and two vice presidents were granted permission to conduct the recording after prior communication, while another female vice president explicitly declined the recording. During the interview process, as soon as the topic was discussed, it was impossible to fully follow the outline provided in advance. Each interviewee presented their experiences in the company from their own perspective in a narrative style, incorporating case stories. The five interviews all exceeded one hour, and the information gained was quite comprehensive.

The second part of the interview was conducted with five middle-level management personnel in the company. The interview was conducted half a month after the completion of the first part of the interview. The researcher digested the content of the first part of the interview, and because middle-level cadres have more specific matters, the interview time was not that long. The interviews were conducted by phone, standing in the lobby of the office building, sitting next to them, and other means of conversation. The length of the interview time varied, and this part has not been explicitly approved for recording.

Through interviews with 10 middle and senior management personnel, the researcher gains a deeper understanding of the development process of Fengyun Technology. The researcher sorted out information since its establishment in 2002, the chairman (founder) was a part-time entrepreneur with a very small scale until 2007. It only provides a brief explanation and does not conduct specific research.

Since 2008, research on Fengyun Technology has been conducted, which can be divided into three stages of restructuring and transformation, based on time nodes and company business models.

1. The first stage (2008-2015) includes difficulties, policy opportunities, CG technology, and transformation.

Fengyun Tech suffered several difficulties during the period. Prior to 2008, Fengyun Technology was engaged in filming promotional videos for real estate companies, but the industry had low demand and small project amounts, resulting in low annual revenue and difficulties in survival. The interviewee mentioned that, since his has more contact with real estate industry, he started working on decoration industry in 2008.

After several years of operation, although the operating income has increased slightly compared to before, he encountered several major difficulties: (1). Traditional service model. Although the decoration industry has a large market, the business model is relatively traditional, which is basic construction services for bricklayers, carpenters, painters, and water and electricity professionals. (2). Traditionally, the main customers are hotels, offices, factories, sales offices, and other projects that focus on functional use. (3). The competition is fierce, and there are many traditional decoration companies, with thousands of them in Xiamen alone. The bidding procedure for each project is very fierce. (4). The market is not standardized. Although it is necessary for construction companies to have qualifications from the perspective of

government management, in reality, teams or individuals who borrow qualifications to undertake projects are everywhere, commonly known as "affiliations", resulting in a very low entry threshold. (5). The team is unstable because Fengyun Technology originally did not have brand influence in the decoration industry. Often, key personnel resign after obtaining project information and become affiliated with other companies to undertake projects. As a company that has not been in this industry for a long time, Fengyun Technology has acquired a decoration company called Luban Decoration Company with a second level construction qualification to renovate and rename it in order to solve the problem of lack of qualifications. Although it has a second level qualification, it does not have brand influence in the market, and it is still difficult to undertake projects because of fierce competition and relatively low profits after undertaking projects. Based on the above reasons, it is difficult for the company to form its own core competitiveness and brand influence, and the development speed is very slow.

Refactoring business models. Due to fierce competition and slow development, the decision-making level of the company has been thinking about how to improve its core competitiveness. The company's senior management keenly seized a policy-reform opportunity and quickly decided to establish a team dedicated to exhibition space decoration, allowing it to operate independently and try it out. This is because there are many teams in the market that specialize in using space decoration, resulting in less competition. The decoration of Party building museums is a new type of policy market. The exhibition space decoration team of Fengyun Technology has continuously undertaken the decoration of multiple Party building museums in Xiamen and Zhangzhou, quickly opening up the market in the field of exhibition space decoration with other traditional decoration companies, forming its own core competitiveness. Fengyun Technology has keenly seized policy opportunities and CG technology, transforming from a traditional decoration company to a company mainly engaged in exhibition space decoration.

2. Phase 2 (2016-2018) Digital Technology and Transformation

With the emergence and rapid development of digital OA systems and AR, VR, and CG digital technologies, the company's senior management has keenly grasped these technologies. While introducing digital management OA systems to improve management efficiency, they have also established a dedicated team to learn and research AR, VR, and CG digital technologies, and carry out decoration + AR/VR/CG business models in enterprise exhibition halls, party building halls, school history halls. The exhibition space decoration market, such as museums, has achieved good results and gradually gained significant influence in this niche

market. During more than two years of experimentation, senior management of the company has been paying attention to and researching national and local policies related to the development of digital technology, and has concluded that both national and local policies are strongly supporting digital development. Therefore, in 2015, the company's decision-making team formulated a comprehensive digital transformation strategy and plan for the entire company. The company's business was fully transformed into the digital display space decoration market, and a digital technology department was established. From 2015 to 2018, the company's performance continued to grow. The operating revenue continued to grow, and the company has won multiple exhibition awards from the domestic decoration industry association, and the brand influence continues to increase.

3. The third stage (2019-present) includes important national policies, digital technology, major events, and transformation.

In January 2017, the Chinese government proposed the strategy of rural revitalization and introduced a series of important policies. The senior team of Fengyun Technology is also keenly aware of the changes in the policy environment. They have specially hired experts from rural revitalization to give lectures at the company, organized and dispatched teams to study government policies, sent teams to investigate the reality of rural revitalization, communicated with officials from the county level government, which is the most critical level of implementing rural revitalization policies, and further established the Rural Revitalization Research Institute.

This is a significant event in the development history of Fengyun Technology Company. After more than 2 years of trial and resource accumulation, as well as the successful creation of the "Shaxian Snacks" cultural brand model case, Fengyun Technology has once again restructured its business service model, introduced creative talents, added creative directors, and transformed the digital technology department into a digital creative department. Based on the original foundation, it has created a three-dimensional display space business model of "decoration + digital technology + cultural brand creativity", focusing on the same cultural brand. We have innovatively proposed the "5 in 1" service model, which includes a digital exhibition hall, a digital show, a digital movie, a digital industrial park, and an online digital display platform. We have quickly obtained digital interaction project orders from multiple cultural brands in multiple cities, continuously increasing our revenue and brand influence.

Fengyun Technology has achieved good results in digital transformation and continues to organize learning and research in new digital technologies such as digital twins and AI technology. This year, it has reached a strategic cooperation with China Digital Group to acquire cutting-edge digital technology resources and prepare to serve customers in more fields.

Through interviews, the first and second restructuring and transformation of Fengyun Technology are due to intense external competition in the first stage, lack of core competitiveness, lack of brand advantage, difficulties in company development, as well as new market opportunities and the development of digital technology. In the process of transformation, emphasis has been placed on personnel training and organizational structure adjustment. The methods of personnel training include going out for research, inviting experts to come in for training, internal departmental, hierarchical, and group discussions, and the addition of a digital technology department and a vice president position in charge of digital technology in the organizational structure.

The third reconstruction of Fengyun Technology is due to the crucial role played by major policies and events. During the third stage, under the national policy of rural revitalization, it gradually formed the process of promoting the cultural brand of "Shaxian Snacks" in Shaxian County, Fujian Province under the original model. The company sent employees with conditions to pursue master's and doctoral degrees, in order to enrich the company's cultural heritage and enhance its competitiveness in the cultural field. At the same time, transform the digital technology department into a digital creative department and add the position of entrepreneurial director in the organizational structure.

Through interviews with five senior managers of Fengyun Technology and five middlelevel managers from different departments, the authenticity of the online data collection analysis conducted on 68 deputy managers and above was confirmed from another perspective. The researcher has gained a deep understanding of the reasons for each transformation and restructure, as well as the external technology and policy environment. As brand influence increases, the locations of customers have also expanded, and Fengyun Technology has transformed from a company that only served customers in Xiamen to a national company that serves customers nationwide.

From the perspective of dynamic capabilities, the development of Fengyun Technology in the past decade has been a process of perceiving and judging new policies and technologies, learning, researching, and obtaining new policy support, technology, and culture, and reconstructing its own business service model.

4.1.5 Analysis of the digital transformation of Fengyun Technology

This section tests the variables of three stages of Fengyun's digital transformation, applying the company's perception and judgment ability, learning and absorption ability, and organizational

restructuring ability to actual projects as independent variables, and conducting regression analysis with enterprise organizational performance as the dependent variable. In this section, the three factors of enterprise performance (sales growth of main business, product reputation, and customer satisfaction) in the questionnaire survey will be summed up as one variable of enterprise performance. While amplifying the impact of dynamic capabilities on enterprise performance, the analysis scale will be reduced.

To eliminate the possibility of multicollinearity between variables in linear regression analysis, stepwise regression analysis will be used. The difference between stepwise regression and regression analysis is that the stepwise regression model automatically identifies significant independent variables (X), while non-significant X is automatically removed from the model. Firstly, analyze the R-squared fit of the model, as well as the VIF value (or tolerance value, tolerance=1/VIF value) that can be analyzed (to determine multicollinearity, VIF>5 generally indicates collinearity, or tolerance<0.2 generally indicates collinearity issues) (if there is only one X, ignore this standard). Secondly, write the model formula. Thirdly, analyze the significance of X, if significant, it indicates that X has an impact on Y, and then analyze the specific direction of the impact relationship. Fourthly, compare and analyze the degree of influence of X on Y. Lastly, researcher summarizes in the report.

According to Table 4.8 below, the descriptive statistics and correlation analysis results of each major variable, show that the mean of each major variable is within a reasonable range, and the variance is also within a reasonable range. Meanwhile, the Pearson correlation coefficient between each variable shows there is a certain correlation among perceived ability (path dependence, perceived judgment), acquisition ability (learning absorption, knowledge application), organizational restructuring (organizational restructuring, strategic flexibility), and organizational performance, indicating a preliminary relationship between variables.

Table 4.8 Pearson correlation analysis

Description	Performance of Traditional Decoration Period	Performance of Transformation Exploration Period	Performance of Development Period
Fast growth in operating revenue.	0.835**	0.510**	0.363**
High operating profit margin.	0.780**	0.338*	0.222
High brand influence.	0.869**	0.431**	0.149
The company organizational governance and structure remain basically unchanged.	0.363*	0.817**	0.813**
The company's operating methods generally follow previous habits and have not changed much.	0.133	0.854**	0.841**
The business scope of the company is basically fixed and unchanged.	0.18	0.876**	0.824**
The company can timely grasp competitor information and respond quickly.	0.864**	0.820**	0.762**
The company can invest more resources and time to obtain market information and make quick decisions to seize market opportunities.	0.856**	0.836**	0.796**
The company is able to timely understand the development trends of new technologies / construction processes / digital technologies in the market and quickly take the initiative to learn.	0.842**	0.792**	0.763**
The company can obtain external knowledge and information through channels.	0.841**	0.823**	0.818**
The company encourages employees to continuously learn digital technologies and knowledge related to the construction industry.	0.834**	0.784**	0.749**
The company encourages employees to exchange project management experience / work skills and other knowledge with each other.	0.941**	0.714**	0.798**
The company can timely implement scientific and high-quality new digital development concepts in the industry.	0.941**	0.651**	0.733**
The company can quickly and effectively apply new digital construction techniques / plans / methods to actual projects.	0.922**	0.563**	0.745**
Company employees effectively apply project experience to new projects.	0.906**	0.571**	0.666**
In response to the opportunities and challenges from the construction market, the company is always able to develop accurate reform plans.	0.923**	0.871**	0.809**
The organizational structure, workflow, and business model of the company can match with the company's development strategy.	0.929**	0.937**	0.880**
The company has a good understanding of its own development status.	0.944**	0.884**	0.875**

Description	Performance of Traditional Decoration	Performance of Transformation Exploration	Performance of Development Period
	Period	Period	1
The company allows department to have freedom to manage and work content.	0.955**	0.909**	0.814**
The project department and subsidiaries of the company have significant decision-making autonomy.	0.916**	0.725**	0.660**
The company establishes an efficient and smooth organizational structure, workflow, and timely adjusts business models in response to changes in the construction market.	0.952**	0.834**	0.876**
* <i>p</i> <0.05 ** <i>p</i> <0.01			

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4.1.5.1 Perception analysis of external environmental opportunities and risks – Perception

Using the company's path dependence and perceptual judgment ability as independent variables, and organizational performance as the dependent variable for stepwise regression analysis (specific regression method: stepwise method), after automatic identification by the model, Fengyun Technology has one remaining factor in the model, that is, able to timely grasp competitor information and quickly respond, with an R-squared value of 0.746. This means that the company's ability to timely grasp competitor information and respond quickly can explain 74.6% of the changes in corporate performance. Moreover, the model passed the F-test (F=106.008, p=0.000<0.05), indicating its effectiveness. The model formula is: Enterprise performance=2.233+2.467 *. The company is able to timely grasp competitor information and respond quickly. In addition, a test was conducted on the multicollinearity of the model, and it was found that all VIF values in the model were less than 5, indicating that there was no problem of multicollinearity; And the D-W value is around the number 2, indicating that the model does not have autocorrelation and there is no correlation between the sample data, indicating that the model is good.

During the exploration period of Fengyun transformation, the company's organizational governance and structure remain basically unchanged, the company's operating methods generally follow past habits and remain basically unchanged, the company's business areas are basically fixed, the company can timely grasp competitor information and respond quickly, the company can invest more resources and time to obtain market information (such as engineering bidding information) and make quick decisions to seize market opportunities, the company is able to timely understand the development trends of new technologies/construction processes/digital technologies in the construction market and quickly take proactive learning as the independent variable, while using enterprise performance as the dependent variable for stepwise regression analysis (specific regression method: stepwise method). After automatic identification by the model, the remaining company's organizational governance and structure remain basically unchanged, Fengyun Technology can invest more resources and time to obtain market information (such as engineering bidding information) and make quick decisions to seize market opportunities. The company can timely understand the development trends of new technologies/construction processes/new digital technologies in the construction market and actively learn from them. In the model, the R-squared value is 0.868, which means that the company's organizational governance and structure remain basically unchanged. The company can invest more resources and time to obtain market information (such as engineering bidding information) and make quick decisions to seize market opportunities. The company can timely understand the development trends of new technologies/construction processes/new digital technologies in the construction market and actively learn, which can explain 86.8% of the changes in enterprise performance. Moreover, the model passed the F-test (F=105.061, p=0.000<0.05), indicating its effectiveness.

The model formula is: Enterprise Performance=1.125+0.390 * The company's organizational governance and structure remain basically unchanged+1.018 * The company can invest more resources and time to obtain market information (such as engineering bidding information) and make quick decisions to seize market opportunities+1.373 * The company can timely understand the development trends of new technologies/construction processes/new digital technologies in the construction market and actively learn quickly.

The regression coefficient value of the company's organizational governance and structure remaining basically unchanged is 0.390 (t=3.923, p=0.000 < 0.01), indicating that the company's organizational governance and structure remaining basically unchanged will have a significant positive impact on corporate performance. The regression coefficient value for companies to invest more resources and time to obtain market information (such as engineering bidding information) and make quick decisions to seize market opportunities is 1.018 (t=3.607, p=0.001 < 0.01), which means that companies can invest more resources and time to obtain market information) and make quick decisions to seize market opportunities, which will have a significant positive impact on corporate performance. The regression coefficient value of 1.373 (t=5.882, p=0.000 < 0.01) indicates that the company's ability to timely understand the development trends of new technologies/construction processes/digital technologies in the construction market and quickly engage in active learning will have a significant positive impact on corporate performance.

During the third digital transformation and development period of Fengyun Technology, the relationship between path dependence, perception and judgment ability, and organizational performance growth is tested in Table 4.9. The company's organizational governance and structure are basically unchanged, and the company's operating methods generally follow past habits without much change. The company's business scope is basically fixed, and the company can timely grasp competitor information and respond quickly. The company is able to invest more resources and time to obtain market information (such as engineering bidding information) and make quick decisions to seize market opportunities. The company can timely understand the development trends of new technologies/construction processes/new digital technologies in the construction market and actively learn as the independent variable. The company's

performance is used as the dependent variable for stepwise regression analysis (specific regression method: stepwise method), which is automatically identified by the model, In the end, the remaining business areas of the company remained basically unchanged. The company was able to invest more resources and time to obtain market information (such as engineering bidding information) and make quick decisions to seize market opportunities. The company was able to timely understand the development trends of new technologies/construction processes/new digital technologies in the construction market and actively learn a total of three items. In the model, the R-squared value was 0.803, This means that the business scope of the company is basically fixed, and the company can invest more resources and time to obtain market information (such as engineering bidding information) and make quick decisions to seize market opportunities. The company can invest more resources and time to obtain market information (such as engineering bidding information) and make quick decisions to seize market opportunities. The company can timely understand the development trends of new technologies/construction processes/new digital technologies in the construction market and actively learn, which can explain 80.3% of the changes in enterprise performance.

Moreover, the model passed the F-test (F=78.666, p=0.000<0.05), indicating its effectiveness. And the model formula is: Enterprise performance=2.360+0.251 * The company's business scope is basically fixed+1.328 * The company can invest more resources and time to obtain market information (such as engineering bidding information) and make quick decisions to seize market opportunities+0.902 * The company can timely understand the development trends of new technologies/construction processes/new digital technologies in the construction market and actively learn quickly. The regression coefficient value of the company's business scope that is basically fixed and unchanged is 0.251 (t=2.706, p=0.009<0.01), indicating that the company's business scope that is basically fixed and unchanged will have a significant positive impact on corporate performance. The regression coefficient value for companies that can invest more resources and time to obtain market information (such as engineering bidding information) and make quick decisions to seize market opportunities is 1.328 (t=5.577, p=0.000<0.01), which means that companies can invest more resources and time to obtain market information (such as engineering bidding information) and make quick decisions to seize market opportunities, which will have a significant positive impact on corporate performance. The regression coefficient of 0.902 (t=4.325, p=0.000<0.01) indicates that the company's ability to timely understand the development trends of new technologies/construction processes/digital technologies in the construction market and quickly engage in active learning will have a significant positive impact on corporate performance.

		Unsta coe	ndardized fficient	Standardized coefficient	-	-	Colline	earity diagnosis
Period	Description	В	Standard error	Beta	- t	р	VIF	Tolerance level
	Constant	2.233	0.769	-	2.902	0.006**	-	-
	The company can timely grasp							
Traditional	competitor information and	2.467	0.24	0.864	10.296	0.000**	1	1
decoration	respond quickly							
period	R^2				0.746			
(n=38)	Adjusted R^2				0.739			
	F			<i>F</i> (1, 36)	= 106.008, p	=0.000		
	D-W value				1.803			
	Constant	1.125	0.666	-	1.688	0.098	-	-
	The company organizational							
	governance and structure remain basically unchanged	0.39	0.099	0.222	3.923	0.000**	1.159	0.863
	The company can invest more							
	resources and time to obtain							
	market information and make	1.018	0.282	0.336	3.607	0.001**	3.145	0.318
Transformation	quick decisions to seize market							
avploration	opportunities							
period	The company can timely							
(n-52)	understand the development							
(II-J2)	trends of new technologies /	1 373	0.233	0 534	5 882	0.000**	2 997	0 334
	construction processes / digital	1.575	0.235	0.554	5.002	0.000	2.771	0.554
	technologies in the market and							
	quickly take initiative to learn							
	R^2				0.868			
	Adjusted R^2				0.86			
	F			F(3, 48))=105.061, _l	<i>p</i> =0.000		
	D-W Value				1.418			

Table 4.9 Results of stepwise regression analysis of perceived ability on organizational performance of enterprises

Devied	Description	Unstandardized coefficient		Standardized coefficient	4	_	Colline	earity diagnosis				
Репод	Description	В	Standard error	Beta	- t	р	VIF	Tolerance level				
	Constant	2.36	0.698	-	3.38	0.001**	-	-				
	The company business scope is basically fixed and unchanged	0.251	0.093	0.158	2.706	0.009**	1.007	0.993				
	The company can invest more resources and time to obtain market information and make quick decisions to seize market	1.328	0.238	0.526	5.577	0.000**	2.619	0.382				
Development Period (n=62)	opportunities The company can timely understand the development trends of new technologies / construction processes / digital technologies in the market and quickly take initiative to learn	0.902	0.208	0.408	4.325	0.000**	2.617	0.382				
	quickly take initiative to learn R^2	0.803										
	Adjusted R^2	0.793										
	F			F(3, 58))=78.666, p	= 0.000						
	D-W Value				1.56							

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Dependent variable: Enterprise performance * p<0.05 ** p<0.01

4.1.5.2 Analysis of acquiring advantages and avoiding disadvantages of internal organizations – Acquisition

Apply the company's acquisition ability (learning absorption ability, knowledge application ability) to actual projects as independent variables, and conduct stepwise regression analysis with organizational performance as the dependent variable.

In the traditional decoration period, Fengyun Technology is able to obtain external knowledge and information through multiple channels. The company encourages employees to continuously learn digital technologies and knowledge related to the construction industry. The company encourages employees to exchange project management experience/work skills and other knowledge with each other. The company can timely implement new concepts of scientific and high-quality digital development in the construction industry. The company can quickly and effectively apply new digital construction processes/plans/methods to actual projects. Company employees are able to effectively apply project experience as an independent variable to new projects, and use enterprise performance as the dependent variable for stepwise regression analysis (specific regression method: stepwise method).

After automatic identification by the model in Table 4.10 below, the remaining company can obtain external knowledge and information through multiple channels, and the company can timely implement new concepts of scientific and high-quality digital development in the construction industry. The company is able to quickly and effectively apply new digital construction techniques/plans/methods to actual projects, with a total of 3 items in the model. The R-squared value is 0.957, which means that the company can obtain external knowledge and information through multiple channels, and can timely implement new concepts of scientific and high-quality digital development in the construction industry. The company is able to actual projects can effectively apply new digital construction through multiple channels, and can timely implement new concepts of scientific and high-quality digital development in the construction industry. The company's ability to quickly and effectively apply new digital construction techniques/schemes/methods to actual projects can explain 95.7% of the changes in enterprise performance.

Moreover, the model passed the F-test (F=253.854, p=0.000 < 0.05), indicating its effectiveness. The model formula is: Enterprise performance=0.957+0.816 * The company can obtain external knowledge and information through multiple channels+0.992 * The company can timely implement scientific and high-quality new digital development concepts in the industry + 0.946 * The company can quickly and effectively apply new digital construction processes/plans/methods to actual projects. In addition, a test was conducted on the multicollinearity of the model, and it was found that there were VIF values greater than 5 but less than 10 in the model, indicating that there may be some collinearity issues. It is

recommended to check for closely related independent variables, remove them, and conduct a new analysis.

The final specific analysis shows the regression coefficient for a company's ability to obtain external knowledge and information through multiple channels is 0.816 (t=6.158, p=0.000<0.01), indicating that the company's ability to obtain external knowledge and information through multiple channels will have a significant positive impact on corporate performance.

The regression coefficient value for the company's timely implementation of new concepts such as scientific and high-quality digital development in the construction industry is 0.992 (t=4.082, p=0.000<0.01), indicating that the company's timely implementation of new concepts such as scientific and high-quality digital development in the construction industry will have a significant positive impact on corporate performance.

The regression coefficient value of the company's ability to quickly and effectively apply new digital construction techniques/plans/methods to actual projects is 0.946 (t=4.142, p=0.000<0.01), which means that the company's ability to quickly and effectively apply new digital construction techniques/plans/methods to actual projects will have a significant positive impact on enterprise performance.

During the second digital transformation exploration period, the relationship between the learning and absorption ability, knowledge application ability, and organizational performance of Fengyun Technology is shown in Table 4.10. The company is able to obtain external knowledge and information through multiple channels, encourages employees to continuously learn digital technologies and knowledge related to the construction industry, and encourages employees to exchange project management experience/work skills with each other. The company can timely implement scientific and effective measures The new concept of high-quality digital development in the construction industry enables companies to quickly and effectively apply new digital construction techniques/plans/methods to actual projects. Company employees can effectively apply project experience to new projects as independent variables, while enterprise performance is used as the dependent variable for stepwise regression analysis (specific regression method: stepwise method), which is automatically identified by the model.

In the end, the remaining company can obtain external knowledge and information through multiple channels. The company encourages employees to continuously learn digital technologies and knowledge related to the construction industry, with a total of 2 items in the model. The R-squared value is 0.802, which means that the company can obtain external

knowledge and information through multiple channels. Encouraging employees to continuously learn digital technologies and knowledge related to the construction industry can explain 80.2% of the reasons for the change in corporate performance.

Moreover, the model passed the F-test (F=99.033, p=0.000<0.05), indicating its effectiveness. And the model formula is: Enterprise performance=0.973+1.177 * The company can obtain external knowledge and information through multiple channels+1.572 * The company encourages employees to continuously learn digital technologies and knowledge related to the construction industry. In addition, a test was conducted on the multicollinearity of the model, and it was found that all VIF values in the model were less than 5, indicating that there was no problem of multicollinearity; And the D-W value is around the number 2, indicating that the model does not have autocorrelation and there is no correlation between the sample data, indicating that the model is good. The final specific analysis shows that the regression coefficient value of the company's ability to obtain external knowledge and information through multiple channels is 1.177 (t=5.054, p=0.000<0.01), indicating that the company's ability to obtain external knowledge and information through multiple channels will have a significant positive impact on corporate performance. The regression coefficient for encouraging employees to continuously learn digital technologies and knowledge related to the construction industry is 1.572 (t=5.659, p=0.000<0.01), indicating that encouraging employees to continuously learn digital technologies and knowledge related to the construction industry will have a significant positive impact on corporate performance.

During the third digital transformation of development period, the relationship between the learning and absorption ability, knowledge application ability, and organizational performance of Fengyun Technology is shown in Table 4.10. The company is able to obtain external knowledge and information through multiple channels, encourages employees to continuously learn digital technologies and knowledge related to the construction industry, and encourages employees to exchange project management experience/work skills and other knowledge with each other. The company can timely implement scientific and effective measures The new concept of high-quality digital development in the construction industry enables companies to quickly and effectively apply new digital construction techniques/plans/methods to actual projects. Company employees can effectively apply project experience to new projects as independent variables, while enterprise performance is used as the dependent variable for stepwise regression analysis (specific regression method: stepwise method), which is automatically identified by the model.

In the end, the remaining company encourages employees to continuously learn digital

technologies and knowledge related to the construction industry. The company can timely implement scientific and high-quality new digital development concepts in the industry. There are a total of two items in the model, with an R-squared value of 0.796, which means that the company encourages employees to continuously learn digital technologies and knowledge related to the construction industry. The company can timely implement science and technology The new concept of high-quality digital development in the construction industry can explain 79.6% of the changes in corporate performance.

Moreover, the model passed the F-test (F=115.154, p=0.000<0.05), indicating its effectiveness. The model formula is: Enterprise Performance=2.011+1.130 * The company encourages employees to continuously learn digital technologies and knowledge related to the construction industry+1.334 * The company can timely implement new concepts of scientific and high-quality digital development in the construction industry. In addition, a test was conducted on the multicollinearity of the model, and it was found that all VIF values in the model were less than 5, indicating that there was no problem of multicollinearity; And the D-W value is around the number 2, indicating that the model does not have autocorrelation and there is no correlation between the sample data, indicating that the model is good.

The final specific analysis shows that the regression coefficient for encouraging employees to continuously learn digital technologies and knowledge related to the construction industry is 1.130 (t=6.052, p=0.000<0.01), indicating that encouraging employees to continuously learn digital technologies and knowledge related to the construction industry will have a significant positive impact on corporate performance. The regression coefficient value for the company's ability to timely implement scientific and high-quality new digital development concepts in the construction industry, is 1.334 (t=6.845, p=0.000<0.01), indicating that the company's ability to timely implement scientific and high-quality new digital development concepts in the construction industry, will have a significant positive impact on corporate performance.

Table 4.10 Results of stepwise regression analysis on the relationship between acquisition capability and organizational performance growth in Fengyun Technology

Daviad	Description	Unsta coe	ndardized fficient	Standardized coefficient	,		Col dia	linearity agnosis
Period	Description	В	Standard error	Beta	- t	р	VIF	Tolerance level
	Constant	0.957	0.335	-	2.855	0.007**	-	-
	The company can obtain external knowledge and information through multiple channels	0.816	0.132	0.32	6.158	0.000**	2.149	0.465
Traditional	scientific and high-quality new digital development concepts in the industry	0.992	0.243	0.38	4.082	0.000**	6.895	0.145
period (n=38)	The company can quickly and effectively apply new digital construction techniques / plans / methods to actual projects		0.228	0.358	4.142	0.000**	5.957	0.168
	R^2				0.957			
	Adjusted R^2				0.953			
	F			F (3, 34)=2	53.854,	p=0.000		
	D-W value				1.711			
	Constant	0.973	0.826	-	1.178	0.245	-	-
	The company can obtain external knowledge and information through multiple channels	1.177	0.233	0.457	5.054	0.000**	2.017	0.496
Transformation	The company encourages employees to							
exploration	continuously learn digital technologies and	1.572	0.278	0.511	5.659	0.000**	2.017	0.496
period	knowledge related to the industry				.			
(n=52)	R^2				0.802			
	Adjusted R ²			E (2 40) 0	0.794	0.000		
	F .			F (2, 49)=9	9.033,	p=0.000		
	D-W value				1.687			

Period	Description	Unstandardized coefficient		Standardized coefficient	4		Collinearity diagnosis		
		В	Standard error	Beta	- 1	p	VIF	Tolerance level	
	Constant	0.973	0.826	-	1.178	0.245	-	-	
Development Period (n=62)	The company can obtain external knowledge and information through multiple channels	1.177	0.233	0.457	5.054	0.000**	2.017	0.496	
	The company encourages employees to continuously learn digital technologies and knowledge related to the industry	1.572	0.278	0.511	5.659	0.000**	2.017	0.496	
	R^2	0.802							
	Adjusted R^2	0.794							
	F	F (2, 49)=99.033, p=0.000							
	D-W value	1.687							

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Dependent variable: Enterprise performance

* p<0.05 ** p<0.01

4.1.5.3 System reconstruction of enterprise digital transformation – Restructure

This section tests the control variables by applying the company's restructuring ability (organizational restructuring ability, strategic flexibility ability) to actual projects as independent variables, and conducting stepwise regression analysis with the company's organizational performance as the dependent variable.

In the traditional decoration period of Fengyun Technology, response to the opportunities and challenges from the construction market, the company is always able to develop accurate reform plans. The company's organizational structure, workflow, and business model can match with its development strategy, and the company has a good understanding of its own development status. The company allows each department to have the freedom to manage and work content, and the company's project department and subsidiaries have greater decisionmaking autonomy. The company establishes an efficient and smooth organizational structure, workflow, and timely adjustment of business models as independent variables in response to changes in the construction market, and conducts stepwise regression analysis with enterprise performance as the dependent variable (specific regression method: stepwise method). After automatic identification by the model, the remaining departments are allowed to have the freedom to manage and work content. The company establishes an efficient and smooth organizational structure in response to changes in the construction market.

In the model, there are two items: workflow and timely adjustment of business models. The R-squared value is 0.929, which means that the company allows each department to have the freedom to manage and work content. The company's efficient and smooth organizational structure, workflow, and timely adjustment of business models in response to changes in the construction market can explain 92.9% of the reasons for changes in enterprise performance. Moreover, the model passed the F-test (F=230.713, p=0.000<0.05), indicating its effectiveness. The model formula is: Enterprise Performance=1.255+1.475 * The company allows each department to have the freedom to manage and work content+1.175 * The company establishes an efficient and smooth organizational structure, workflow, and timely adjustment of business models in response to changes in the construction market. In addition, a test was conducted on the multicollinearity of the model, and it was found that the VIF value in the model was greater than 10, indicating the presence of collinearity issues.

The final specific analysis shows the regression coefficient value of the company allowing each department to have the freedom of management and work content is 1.475 (t=3.358, p=0.002<0.01), indicating that allowing each department to have the freedom of management

and work content will have a significant positive impact on corporate performance.

The regression coefficient value of the company's establishment of an efficient and smooth organizational structure, workflow, and timely adjustment of business models in response to changes in the construction market is 1.175 (t=2.940, p=0.006<0.01), indicating that the company's establishment of an efficient and smooth organizational structure, workflow, and timely adjustment of business models in response to changes in the construction market will have a significant positive impact on enterprise performance.

During the second exploration period of digital transformation in Fengyun Technology, the relationship between organizational restructuring ability, strategic flexibility ability, and organizational performance growth is tested in Table 4.11. In response to opportunities and challenges from the construction market, the company is always able to develop accurate reform plans, and its organizational structure, workflow, and business model can match the company's development strategy. The company has a good understanding of its own development status, the company allows each department to have the freedom of management and work content. The project department and subsidiaries of the company have greater decision-making autonomy. The company establishes an efficient and smooth organizational structure, workflow, and timely adjustment of business models in response to changes in the construction market as independent variables, while enterprise performance is used as the dependent variable for stepwise regression analysis (specific regression method: stepwise method), which is automatically identified by the model.

In the end, in response to the opportunities and challenges from the construction market, the company is able to develop accurate reform plans. The company allows each department to have the freedom of management and work content, and the project department and subsidiaries have greater decision-making autonomy. The company has formed an efficient and smooth organizational structure, workflow, and timely adjustment of business models for the changes in the construction market.

In the model, the R-squared value is 0.936, This means that in response to opportunities and challenges from the construction market, the company is always able to develop accurate reform plans, allowing each department to have the freedom to manage and work content. The company's project department and subsidiaries have greater decision-making autonomy. The company's efficient and smooth organizational structure, workflow, and timely adjustment of business models can explain 93.6% of the reasons for changes in enterprise performance in response to changes in the construction market.

Moreover, the model passed the F-test (F=172.867, p=0.000<0.05), indicating its

effectiveness. And the model formula is: Enterprise Performance=0.520+0.580 * In response to opportunities and challenges from the construction market, the company can always formulate accurate reform plans+2.151 * The company allows each department to have the freedom to manage and work content+0.834 * The company's project department and subsidiaries have greater decision-making autonomy -0.691 * The company establishes an efficient and smooth organizational structure, workflow, and timely adjustment of business models in response to changes in the construction market. In addition, a test was conducted on the multicollinearity of the model, and it was found that there were VIF values greater than 5 but less than 10 in the model, indicating that there may be some collinearity issues. It is recommended to check for closely related independent variables, remove them, and conduct a new analysis. The final specific analysis shows that the regression coefficient value of the company's ability to formulate accurate reform plans for opportunities and challenges from the construction market is 0.580 (t=3.164, p=0.003<0.01), which means that the company's ability to formulate accurate reform plans for opportunities and challenges from the construction market will have a significant positive impact on corporate performance.

The regression coefficient value of the company allowing each department to have the freedom of management and work content is 2.151 (t=8.642, p=0.000 < 0.01), indicating that allowing each department to have the freedom of management and work content will have a significant positive impact on corporate performance. The regression coefficient value for the company's project department and subsidiaries with greater decision-making autonomy is 0.834 (t=5.807, p=0.000 < 0.01), indicating that the company's project department and subsidiaries with greater decision-making autonomy will have a significant positive impact on corporate performance. The regression coefficient value of the company's efficient and smooth organizational structure, workflow, and timely adjustment of business models in response to changes in the construction market is -0.691 (t=-2.856, p=0.006 < 0.01), indicating that the company's efficient and smooth organizational structure, workflow, and timely adjustment of business models in response to changes in the construction market is -0.691 (t=-2.856, p=0.006 < 0.01), indicating that the company's efficient and smooth organizational structure, workflow, and timely adjustment of business models in response to changes in the construction market is -0.691 (t=-2.856, p=0.006 < 0.01), indicating that the company's efficient and smooth organizational structure, workflow, and timely adjustment of business models in response to changes in the construction market will have a significant negative impact on enterprise performance.

During the third digital transformation of development period, the relationship between organizational restructuring ability, strategic flexibility ability, and organizational performance of Fengyun Technology is shown in Table 4.11. In response to the opportunities and challenges from the market, the company is always able to formulate accurate reform plans. The company's organizational structure, workflow, and business model can match with its development strategy, and the company has a good understanding of its own development status. The company allows

each department to have the freedom of management and work. The project department has greater decision-making autonomy. It establishes an efficient and smooth organizational structure, workflow, and timely adjustment of business in response to changes in the market as independent variables, while enterprise performance is used as the dependent variable for stepwise regression analysis (specific regression method: stepwise method).

In the end, in response to the opportunities and challenges from the market, the company is always able to develop accurate reform plans. The company's organizational structure, workflow, and business model can match with its development strategy. The company allows each department to have the freedom to manage and work, with a total of three factors in the model. The R-squared value is 0.850, which means the company is always able to develop accurate reform plans for the opportunities and challenges from the construction market. The organizational structure, workflow, and business model of the company can be matched with the company's development strategy. The company allows each department to have the freedom to manage and work, which can explain 85.0% of the changes in enterprise performance.

Moreover, the model passed the F-test (F=109.975, p=0.000 < 0.05), indicating its effectiveness. The model formula is: Enterprise Performance=1.206+0.487 * In response to opportunities and challenges from the construction market, the company can always develop accurate reform plans+1.357 * The company's organizational structure, workflow, and business model can match the company's development strategy+0.843 * The company allows each department to have the freedom to manage and work content. In addition, a test was conducted on the multicollinearity of the model, and it was found that all VIF values in the model were less than 5, indicating that there was no problem of multicollinearity. The D-W value is around the number 2, indicating that the model does not have auto-correlation and there is no correlation between the sample data, indicating that the model is good.

The final specific analysis shows the regression coefficient of the ability to formulate accurate reform plans for opportunities and challenges from the market is 0.487 (t=2.114, p=0.039<0.05), indicating the company's ability to formulate plans for opportunities and challenges and will have a significant positive impact. The regression coefficient of organizational structure, workflow, and business model can match with its development strategy is 1.357 (t=5.834, p=0.000<0.01), indicating its structure, workflow, and business model that can match the development strategy, will have a significant positive impact. The regression coefficient of the company allowing each department to have management and work freedom is 0.843 (t=3.869, p=0.000<0.01), indicating each department to have the freedom of management and work content will have a significant positive impact on corporate performance.

Period	Item	Unstandardized coefficient		Standardized coefficient			Collinearity diagnosis			
		В	Standard error	Beta	t	р	VIF	Tolerance level		
Traditional decoration period (n=38)	Constant	1.255	0.434	-	2.892	0.007**	-	-		
	The company allows each department to have the freedom to manage and work	1.475	0.439	0.52	3.358	0.002**	11.889	0.084		
	The company establishes an efficient and smooth organizational structure, workflow, and timely adjusts business models in response to changes in the market	1.175	0.4	0.455	2.94	0.006**	11.889	0.084		
	R^2	0.929								
	Adjusted R^2				0.925					
	F	F (2, 35)=230.713, p=0.000								
	D-W Value	1.896								
	Constant	0.52	0.452	-	1.151	0.256	-	-		
	In response to the opportunities and challenges									
	from the market, the company is always able	0.58	0.183	0.219	3.164	0.003**	3.554	0.281		
	to develop accurate reform plans									
Transformation exploration period (n=52)	The company allows each department to have the freedom to manage and work	2.151	0.249	0.791	8.642	0.000**	6.186	0.162		
	The project department and company									
	subsidiaries have significant decision-making	0.834	0.144	0.345	5.807	0.000**	2.603	0.384		
	autonomy									
	The company establishes an efficient and		0.242							
	smooth organizational structure, workflow,	-0.691		-0.269	-2.856	0.006**	6.549	0.153		
	and timely adjusts business models in response									
	to changes in the market									
	R^2				0.936					
	Adjusted R^2	0.931								
	F	F (4, 47)=172.867, p=0.000								
	D-W Value				1.938					

Period	Item	Unstandardized coefficient		Standardized coefficient	+		Collinearity diagnosis		
		В	Standard error	Beta	l	p	VIF	Tolerance level	
Development Period (n=62)	Constant	1.206	0.63	-	1.915	0.06	-	-	
	In response to the opportunities and challenges from the construction market, the company is always able to develop accurate reform plans	0.487	0.231	0.186	2.114	0.039*	2.993	0.334	
	business model of the company can be matched with the company's development	1.357	0.233	0.511	5.834	0.000**	2.98	0.336	
	The company allows each department to have the freedom to manage and work	0.843	0.218	0.308	3.869	0.000**	2.451	0.408	
	R^2	0.85							
	Adjusted R^2				0.843				
	F	F (3, 58)=109.975, p=0.000							
	D-W Value				1.897				

Dependent variable: Enterprise performance

* *p*<0.05 ** *p*<0.01

4.1.6 Analysis and discussion on the results of the three transformations of Fengyun

This study focuses on the basic relationship among the variables of digital transformation, dynamic capabilities, and environmental uncertainty in decoration enterprises. It explores the inherent relationship between the different dimensions of digital transformation and dynamic capabilities in different stages of Fengyun Enterprises and their performance. Drawing on the theory of dynamic capabilities, a corresponding theoretical model is constructed, and 23 hypotheses are proposed for three stages. The analysis results based on Fengyun sample data show that all 22 hypotheses proposed in this study are supported by the data, and only one hypothesis during Fengyun's second transformation, which states "the company's efficient and smooth organizational structure, workflow, and timely adjustment of business models in response to changes in the construction market will have a significant positive impact on corporate performance", has not been validated by the data. The specific situation is shown in Table 4.12.

Regarding the above hypothetical results, the specific discussion is as follows:

4.1.6.1 Discussion on the Results of Perceived Ability and Corporate Performance in the Digital Transformation of Decoration Enterprises.

In the complex construction industrialization system, the main body of digital transformation – decoration enterprises play an important role in the transformation process, and their binary structure composed of digital technology is the basis for implementing digital transformation. However, relying solely on the main body of the decoration enterprise or the technology itself is not enough to achieve successful transformation. It is necessary to organically integrate the main body, technology, and dynamic capabilities throughout the entire transformation process, giving the transformation core impetus. In recent years, some decoration companies have begun digital transformation, and some of them have achieved certain results.
Digital Transformation in Chinese Decoration Industry: A Dynamic Capabilities Perspective

Table 4.12 Summary of hypothesis testing results

Digital Transformation Stage	Dynamic Capabilities	Assumptions	Results
1 st Digital Transformation in Fengyun Technology	Perception and judgement ability	The company's ability to timely grasp competitor information and respond quickly will have a significant positive impact on corporate performance.	Pass
		The company's ability to obtain external knowledge and information through multiple channels will have a significant positive impact on corporate performance.	Pass
	Learning and absorption ability	The timely implementation of new concepts, such as scientific and high-quality digital development in the industry will have a significant positive impact on corporate performance.	Pass
		The company's ability to quickly and effectively apply new digital construction techniques / schemes / methods to actual projects will have a significant positive impact on performance.	Pass
	Organizational	Allowing departments to have the freedom to manage and work content will have a significant positive impact on corporate performance.	Pass
	restructure capability	The establishment of an efficient and smooth organizational structure, workflow, and timely adjustment of business models in response to changes in the market will have a significant positive impact on corporate performance.	Pass
2 nd Digital Transformation of Fengyun Technology	Perception and judgement ability	The basic unchanged organizational governance and structure of a company will have a significant positive impact on corporate performance.	Pass
		The company's ability to invest more resources and time to obtain market information and make quick decisions to seize market opportunities will have a significant positive impact on corporate performance.	Pass
		Being able to timely understand the development trends of new technologies / construction processes / digital technologies in the construction market and actively learn from them will have a significant positive impact on corporate performance.	Pass
	Learning and absorption ability	The company's ability to obtain external knowledge and information through multiple channels will have a significant positive impact on corporate performance.	Pass
		Encouraging employees to continuously learn digital technologies and knowledge related to the industry will have a significant positive impact on corporate performance.	Pass
	Organizational restructure capability	In response to the opportunities and challenges from the construction market, the company's ability to develop accurate reform plans will have a significant positive impact on corporate performance.	Pass
		Allowing departments to have the freedom to manage and work content will have a significant positive impact on corporate performance.	Pass

		The project department and subsidiaries of a company have significant decision-making autonomy, which can have a positive impact on corporate performance.	Pass
		The establishment of an efficient and smooth organizational structure, workflow, and timely adjustment of business models in response to changes in the construction market will have a significant positive impact on corporate performance.	Failed
		The basically fixed business scope of a company will have a significant positive impact on corporate performance.	Pass
3 rd Digital Transformation of Fengyun Technology	Perception and judgement ability	The company's ability to invest more resources and time to obtain market information (such as engineering bidding information) and make quick decisions to seize market opportunities will have a significant positive impact on corporate performance.	Pass
	, , , , , , , , , , , , , , , , , , , ,	Being able to timely understand the development trends of new technologies/construction processes / digital technologies in the market and actively learn from them will have a significant positive impact on corporate performance.	Pass
	Learning and absorption ability	Encouraging employees to continuously learn digital technologies and knowledge related to the construction industry will have a significant positive impact on corporate performance. The timely implementation of new concepts such as scientific and high-quality digital	Pass
		development in the construction industry by the company will have a significant positive impact on corporate performance.	Pass
		In response to the opportunities and challenges from the construction market, the company's ability to develop accurate reform plans will have a significant positive impact on corporate	Pass
	Organizational	performance.	
	restructure capability	The alignment of a company's organizational structure, workflow, and business model with its development strategy will have a significant positive impact on corporate performance.	Pass
		Allowing departments to have the freedom to manage and work content will have a significant positive impact on corporate performance.	Pass

Some companies have proven through practice that dynamic capabilities positively enhance their performance during digital transformation, and there is also relevant research in the academic community. Green (2008) believes that decoration enterprises also have obvious path dependence characteristics within the industry and cannot go against the vast dynamic environment changes. Dynamic capabilities can perceive changes, thereby promoting overall learning and contextualized decision-making of decoration companies.

Based on these practices and theories, this research empirically explores the relationship between perceived ability and corporate performance in the digital transformation of decoration companies. In the three stages of digital transformation, the empirical results of perceived ability on corporate performance supports the study, which affects corporate performance from two dimensions. Firstly, the path dependence characteristic of the company supports its stability. In the second digital transformation of Fengyun, the regression coefficient value of the company's organizational governance and structure remained basically unchanged was 0.390 (t=3.923, p=0.000 < 0.01). Maintaining the stability of organizational governance and structure helps to provide internal stability and predictability. This enables employees to better adapt and understand their roles and responsibilities, thereby better fulfilling their job responsibilities.

When the organizational structure remains unchanged, the decision-making hierarchy and responsibility allocation become clearer, decision-making can be made more quickly and efficiently, avoiding decision-making delays or confusion. In a relatively stable environment, employees can better understand the organization's goals and strategies, gradually accumulate experience and knowledge, and thus improve the organization's performance. When the organizational structure remains stable, employees are more likely to establish a sense of belonging and commitment to the organization. They are able to better identify and adapt to organizational culture and values, and are willing to make more efforts for the success of the organization. In the third digital transformation of Fengyun, the regression coefficient value of the company's business scope remained basically unchanged at 0.251 (t=2.706, p=0.009<0.01).

Through the fixed business scope, companies can focus on specific products or services, conduct in-depth research, accumulate experience, and establish their own professional advantages. This helps to improve the quality and competitiveness of products or services, thereby having a positive impact on business performance. Enterprises can reduce costs and improve efficiency through specialized production, procurement, and supply chain management, which has a positive impact on their performance and enables them to operate more competitively. By gaining a deeper understanding and familiarity with the market, competitors, and customer needs in specific fields, enterprises can more accurately predict and

manage risks. This helps to avoid risks and wrong decisions, improve the stability and longterm sustainability of the enterprise. Of course, a fixed business area does not mean that a company cannot adapt to changes or adjust its strategy. When the market environment changes rapidly or opportunities arise, companies may need to flexibly adjust their business scope to maintain competitiveness and adapt to new market demands. Therefore, when deciding whether to operate a fixed business area, enterprises need to comprehensively consider factors such as market trends, competitive trends, internal resources, and capabilities.

Secondly, there is the ability to perceive and judge. In the three digital transformations of Fengyun, we can see the positive impact of perception and judgment on corporate performance. The regression coefficient value for companies to timely grasp competitor information and respond quickly is 2.467 (t=10.296, p=0.000<0.01). The regression coefficient value for companies to invest more resources and time to obtain market information (such as engineering bidding information) and make quick decisions to seize market opportunities is 1.018 (t=3.607, p=0.001<0.01). The regression coefficient value of 1.373 (t=5.882, p=0.000<0.01) indicates that the company is able to timely understand the development trends of new technologies/construction processes/digital technologies in the construction market and actively learn from them. In digital transformation, enterprises can utilize technology and data analysis tools to timely obtain information about their competitors. These tools can collect data from various channels, including competitor website activities, social media activities, market reports, and user feedback. By analyzing this data, enterprises can gain a deep understanding of key information such as competitors' market strategies, product characteristics, pricing strategies, and brand image. Mastering information about competitors can help businesses respond quickly and make strategic decisions. Enterprises can draw on the successful experiences of their competitors and apply them in their strategies.

At the same time, enterprises can also timely detect new measures from competitors and quickly take corresponding measures to maintain a competitive advantage. For example, companies can adjust market pricing, improve quality, and strengthen market promotion. By timely grasping information about competitors and responding quickly, enterprises can enhance their competitiveness in the market, thereby improving their performance. Enterprises can better seize market opportunities, adjust their strategies in a timely manner, quickly meet consumer demand, and thereby increase sales and market share. In addition, timely response can also help companies reduce competitive risks and minimize business losses. The positive impact on corporate performance lies in whether the company can quickly perceive competitor information and make flexible judgments and response measures.

Enterprises invest more resources and time to obtain market information, especially important market opportunities such as engineering bidding information, which can have a positive impact on enterprise performance. Firstly, timely acquisition of market information can help enterprises better perceive and seize market opportunities. Market information such as engineering bidding information reflects market demand and competitive status. Enterprises can adjust their strategies based on this information, quickly develop marketing plans, and participate in the bidding process in a timely manner. This helps companies to attract more business opportunities and orders, increase business volume and revenue. Secondly, by perceiving market information and making quick decisions, enterprises can optimize resource allocation and improve production and operational efficiency. For example, companies can arrange production plans reasonably based on changes in owner demand, ensuring that progress matches owner demand, and avoiding situations of overcapacity or insufficient supply.

In addition, enterprises can also improve their market share and profit margin by timely understanding the situation of market competitors and adjusting their product strategies. Moreover, the market competition is fierce and information updates quickly. If enterprises cannot perceive market information and make decisions in a timely manner, they may miss market opportunities, leading to adverse effects such as decreased competitiveness and declining profits. By investing more resources and time to obtain market information and make quick decisions, enterprises can better respond to market changes and competitive challenges, reduce risks, and enhance competitiveness. Companies can achieve long-term sustainable development goals such as business growth, market share enhancement, and cost control through this approach, thereby improving their performance.

Additionally, by investing resources and time to obtain market information and make quick decisions, enterprises can also establish good customer relationships and brand image, thereby enhancing market competitiveness and long-term development capabilities. Enterprises can quickly respond in the market, meet customer needs better, and adjust products and services based on market information to improve user satisfaction and loyalty. This helps companies establish a good brand image, enhance market reputation, and attract more customers and partners to achieve sustained growth. Enterprises can timely understand the new trends, latest technologies, and best practices in the industry, make corresponding adjustments and innovations based on market information, promote continuous development, and maintain competitive advantages. This helps companies establish a leading position in the industry, improve their market share and profitability. Investing resources and time to obtain market information and make quick decisions has a comprehensive positive impact on corporate

performance. Through this approach, enterprises can maintain agility and competitiveness in the market, improve market responsiveness and market share, and achieve sustainable development and long-term success.

In the process of enterprise digital transformation, enterprises need to maintain a keen market insight, constantly understand the development trends of new technologies, construction processes, and digital technologies in the construction market. This helps enterprises to timely grasp the application of new technologies, thereby enhancing their competitiveness. Enterprises can understand the new technological development trends in the market through various channels. For example, pay attention to professional industry media, association organizations, industry exhibitions. These channels can provide information on market trends and application cases of new technologies. Enterprises can also actively learn and gain a deeper understanding of the principles, applications, advantages and disadvantages of new technologies, in order to better grasp the application of new technologies.

There are many ways to actively learn, such as attending training courses, seminars, listening to expert reports, and learning new technologies through online learning resources such as the Internet. Timely understanding of the development trends of new technologies in the market and quick proactive learning has a positive impact on corporate performance. On the one hand, enterprises can timely understand the application cases of new technologies in the market, grasp the development direction of new technologies, and achieve early layout of new technology applications. On the other hand, companies can better grasp the principles and advantages and disadvantages of new technologies when applying them, avoid errors in technology application, and improve the effectiveness of technology application. By adopting new technologies and processes, the efficiency of the construction process can be improved, construction costs can be reduced, and construction quality can be improved. All of these can enhance the competitiveness of enterprises in the market, thereby enhancing their performance.

In the process of digital transformation, perceptual ability is crucial for enterprises, as it can help them grasp market trends, understand customer needs, and adjust business strategies in a timely manner. By analyzing market data, trends, and industry dynamics, enterprises can better understand market demand and potential opportunities. This helps companies formulate accurate product development and marketing strategies, improve product market competitiveness, and thus enhance their performance. With the advancement of digital transformation, enterprises can understand customer preferences and needs by collecting and analyzing a large amount of customer data. With this information, companies can provide customers with more personalized products and services, enhance customer loyalty, improve customer satisfaction and repurchase rates, and thereby improve the performance of the enterprise. By analyzing competitors and perceiving market dynamics, enterprises can adjust their strategies and operational models in a timely manner to cope with market changes and competitive pressures. This helps companies maintain a competitive advantage, increase market share, and ultimately improve their performance. The perception ability of decoration enterprises in digital transformation has a significant impact on their performance. It can help businesses seize market opportunities, provide personalized customer experiences, and monitor competitors and market changes in real-time, thereby enhancing the competitiveness and performance level of the enterprise.

4.1.6.2 Discussion on the Results of Acquiring Capability and Corporate Performance in Digital Transformation of Decoration Enterprises.

In digital transformation, the key factor is acquisition capability, which mainly includes the ability of enterprises to collect, analyze, interpret, and utilize data. Firstly, enterprises need to establish an effective data collection system, which can be achieved through new information technology equipment and software. Then, enterprises need to have the ability to conduct indepth analysis of the collected data, identifying hidden information and patterns from it. Finally, enterprises need to be able to interpret these information and patterns correctly and make appropriate decisions based on them. Only with these acquisition capabilities can enterprises truly achieve digital transformation.

The acquisition ability of a company can directly affects its performance. In digital transformation, acquiring capabilities can help enterprises grasp market dynamics in advance, predict market trends, and make correct decisions. Acquiring ability can also help businesses improve the quality of products or services, meet customer needs, and thus increase customer satisfaction. Overall, acquiring capability can improve a company's performance through various means, including improving production efficiency, reducing operating costs, enhancing the connection between the company and the market, improving customer satisfaction, and enhancing the company's competitiveness. In the current digital era, enterprises should attach importance to their acquisition ability in digital transformation, which will help them achieve positive corporate performance.

The research results on Fengyun conducted earlier show that acquisition ability affects corporate performance from two aspects: learning absorption ability and knowledge application ability. In terms of learning absorption ability, empirical results show that the regression coefficient for companies to obtain external knowledge and information through multiple

channels is 0.816 (t=6.158, p=0.000 < 0.01), and the regression coefficient for companies to encourage employees to continuously learn digital technologies and knowledge related to the construction industry is 1.572 (t=5.659, p=0.000 < 0.01);

By obtaining external knowledge and information through multiple channels and encouraging employees to continuously learn digital technologies and knowledge related to the construction industry, enterprises can acquire the latest knowledge and technologies in the construction industry, which can enable more effective project planning, design, and implementation, thereby improving production efficiency. For example, using advanced Building Information Modeling (BIM) technology, enterprises can optimize their designs early in the project, reduce later changes, and save time and costs. Continuous learning of digital technology and knowledge in the construction industry can enable enterprises to continuously innovate and develop more competitive products and services.

Through continuous learning and innovation, enterprises may open up new markets or expand their existing market share. For example, by using new digital technologies, enterprises can expand their business to new geographic regions or new customer groups. By continuously learning and applying the latest knowledge in the construction industry, enterprises can provide higher quality products and services, thereby improving customer satisfaction. For example, by using advanced construction methods and techniques, a more comfortable and safe building environment can be provided, thereby improving customer satisfaction. Enterprises obtain external knowledge and information through multiple channels, and encourage employees to continuously learn digital technologies and knowledge related to the construction industry, which has a positive impact on corporate performance.

Through continuous learning and innovation, companies can also establish a positive image within the industry and be seen as leaders rather than followers. This kind of image enhancement can help companies establish stronger brand awareness within the industry, attract more partners and investors. By learning and applying new digital technologies, enterprises can more effectively utilize resources and reduce waste. For example, through refined construction management and logistics planning, waste of building materials and equipment can be reduced, thereby lowering costs. By using advanced digital technology and knowledge, enterprises can complete projects faster and improve execution efficiency. This can not only save time and costs, but also help enterprises obtain investment returns faster; By obtaining the latest industry knowledge and information, enterprises can make wiser and more timely decisions. This can help businesses avoid risks, seize market opportunities, and thus gain greater competitive advantages.

In summary, obtaining external knowledge and information through multiple channels and encouraging employees to continuously learn digital technologies and knowledge related to the construction industry can have a positive impact on the production efficiency, innovation ability, market competitiveness, employee satisfaction, market share, customer satisfaction, corporate image, resource utilization efficiency, project execution speed, and decision quality of the enterprise, thereby significantly improving corporate performance.

4.1.6.3 Discussion on the Results of Reconstruction Ability and Enterprise Performance in the Digital Transformation of Decoration Enterprises.

The process of digital transformation in decoration enterprises involves changes in organizational and business models, and requires the restructuring of capabilities to adapt to this transformation. The ability to refactor includes a company's mastery of emerging technologies, ability to process and analyze data, and ability to explore and adapt to new business models. These abilities have a significant impact on the performance and effectiveness of enterprises in digital transformation.

Corporate performance refers to the measurable results achieved by a decorative enterprise in achieving established goals using certain resources during a specific period of time. In the process of digital transformation, enterprise performance is not only influenced by the ability of enterprise restructuring, but also by many factors such as market environment, industry competition situation, policies and regulations.

On the one hand, decoration enterprises with strong restructuring capabilities can often better adapt to the needs of digital transformation and improve corporate performance. For example, enterprises use technologies such as data analysis and artificial intelligence to deeply explore and analyze customer needs, market trends, and internal operational data, in order to optimize product design, production, and sales, improve enterprise efficiency and customer satisfaction, and ultimately enhance enterprise performance. On the other hand, if decoration enterprises fail to effectively enhance their reconstruction capabilities in digital transformation, it may have a negative impact on their performance. For example, enterprises may face issues such as the introduction of new technologies and organizational restructuring during digital transformation, leading to decreased production efficiency, increased customer complaints, and even operational risks, which can have a negative impact on enterprise performance. This study found through empirical research that the hypothesis of positive impact of strategic flexibility and organizational restructuring ability on corporate performance is supported.

The regression coefficient value of the company allowing each department to have the

freedom to manage and work content is 1.475 (t=3.358, p=0.002<0.01). The regression coefficient value of the company's efficient and smooth organizational structure, workflow, and timely adjustment of business models in response to changes in the construction market is 1.175 (t=2.940, p=0.006<0.01). The regression coefficient value for the project department and subsidiaries of the company with significant decision-making autonomy is 0.834 (t=5.807, p=0.000<0.01). When companies give departments and employees more freedom, it can stimulate their creativity and sense of responsibility. Employees can execute tasks based on their own judgment and best practices, rather than just following rigid rules. This can improve work efficiency and make employees more engaged in their work. At the same time, when enterprises can flexibly adjust their organizational structure, workflow, and business models according to market changes, they can better adapt to market demand and improve competitiveness.

In the second stage of transformation, the regression coefficient value of the company's efficient and smooth organizational structure, workflow, and timely adjustment of business models in response to changes in the construction market is -0.691 (t=-2.856, p=0.006 < 0.01), indicating that excessive strategic flexibility will have a significant negative impact on corporate performance. Therefore, while granting freedom and decision-making autonomy, enterprises need to establish effective communication and coordination mechanisms to ensure that all departments can consistently pursue the overall goals of the enterprise.

In this empirical study, the regression coefficient value of 0.487 (t=2.114, p=0.039<0.05) indicates that companies are able to formulate accurate reform plans in response to opportunities and challenges from the construction market. The regression coefficient value that matches the company's organizational structure, workflow, and business model with the company's development strategy is 1.357 (t=5.834, p=0.000<0.01). In response to the opportunities in the construction market, enterprises need to keenly capture these opportunities. For example, with the process of urbanization, the demand for infrastructure construction in the construction market is increasing. Enterprises should develop reasonable reform plans based on market demand, including optimizing products and services, improving technological levels, and expanding market share.

Secondly, in the face of challenges in the construction market, such as fierce competition, policy changes, technological updates, enterprises need to calmly analyze and formulate effective response strategies. This may include enhancing the core competitiveness of the enterprise, developing new technologies, and improving the management level and efficiency of the enterprise. At the same time, the organizational structure, workflow, and business model

of the enterprise also need to be matched with the company's development strategy. If the development strategy of a company is to move towards internationalization, the organizational structure of the company may need to be flatter, the workflow may need to be more standardized, and the business model may need to be more market-oriented.

Decoration enterprises should focus on enhancing their reconstruction capabilities in digital transformation to adapt to market changes and industry competition, and thereby improve their performance. At the same time, enterprises should also pay attention to the impact of market environment, policies and regulations on their performance, and formulate scientific and reasonable digital transformation strategies to achieve sustainable development.

4.2 Multi-case studies on the overall digital transformation of firms from the perspective of dynamic capabilities

The three companies studied in this section mainly focused on traditional decoration elements before transformation, and their most critical qualifications were decoration design and construction qualifications. Through the continuous perception and judgment of policies and regulations, market opportunities, and display methods by company managers, learning and applying them, the organizational structure and business service model of the companies are reconstructed to improve their execution efficiency and enhance the interaction efficiency between customers and society. With the rapid development of digital technology, the three case companies have continuously applied new digital technologies with strong dynamic capabilities to provide efficient solutions for customer needs, constantly breaking through the original customer scope. Now, they have all transformed into digital decoration enterprises with digital decoration elements as the main focus.

Unlike previous research papers on digital transformation in architecture, previous papers have focused on the digital transformation of improving organizational efficiency within enterprises, while the three companies studied in this research are a full chain and all-round digital transformation from improving internal efficiency to restructuring business service models to improve the interaction efficiency between customers and society.

4.2.1 Case study of Fengyuzhu Cultural Technology

Shanghai Fengyuzhu Cultural Technology Co., Ltd. is a listed company and a leading enterprise in the application of digital technology in decoration industry in China. The company is committed to the research and development of new digital media technology, and the production, distribution, and management of digital content (Fengyuzhu Culture Technology, 2024).

Relying on the company's strong creativity, design, and content production capabilities, combined with years of accumulated key technologies such as CG special effects, humancomputer interaction, naked eye 3D, holographic imaging, 5G cloud XR, AIGC, and big data visualization, the company's products and systems are widely used in many fields such as government services, urban cultural experiences, digital displays, cultural tourism, broadcasting and television MCN, new retail experiences, and digital art consumption. The arrival of the 5G era will promote disruptive changes in digital technology. The company will take 5G "new infrastructure" as the strategic cornerstone, strengthen 5G backend applications, increase investment in 5G real-time cloud rendering, holographic reality, VR, AR, MR, 4K/8K ultra high definition video and other digital new media technologies, strengthen the development, creation, and operation capabilities of digital cultural intellectual properties, consolidate the advantages of digital content production and scene supply, and strive to become a leading global leader in new media digital technology and a high-quality digital content omnichannel service provider (Fengyuzhu Culture Technology, 2024).

As the first composite design building in the domestic digital culture exhibition industry, Fengyuzhu has a total length of nearly 20000 meters ² LOFT office space, designers use concise and fluent space design language and unique design concepts to convey the core values and service concepts of Fengyuzhu to the employees, customers, and visitors here. The overall design adheres to the concept of "standalone, creative, and digital", with cross-border development and disruptive design, innovatively creating an entertainment and creative design workshop that integrates digital technology, creative design, art and entertainment.

This research studies the full text of Fengyuzhu's public annual report from 2017 to 2021. This company has been the number one in the field of exhibition space decoration for five consecutive years, occupying over 60% of the market share in the decoration of large urban planning exhibition halls in China. As the new market for planning museums in China gradually shrinks, they utilize their resource advantages to continuously learn and apply new technologies, reconstruct business models, serve new business areas, increase the company's own revenue, and enhance brand influence. From the perspective of dynamic capabilities, this research presents the process of learning and applying new digital technologies and reconstructing business service models for Fengyuzhu in the form of a dynamic capability diagram, as shown in Figure 4.1:



Figure 4.1 Dynamic capability structure of Fengyuzhu's digital transformation

The data in Figure 4.1 is a dynamic capability diagram of the entire process from 2017 to 2021, integrating new digital technologies and expanding new customer boundaries, without specific time intervals. Based on the urban experience space service as the basic service business model, continuously perceiving, judging, learning and applying new digital technologies, reconstructing new business service models, expanding service boundaries, and enhancing the company's revenue and influence is a dynamic capability process diagram.

Fengyuzhu is a leading enterprise in the Chinese smart exhibition hall industry, relying on strong creativity, design, and content production capabilities, combined with various key technological means such as CG special effects, human-computer interaction, naked eye 3D, holographic imaging, 5G cloud XR, AI artificial intelligence, big data visualization. The company's products and systems are widely used in government services, urban cultural experience, digital display, cultural tourism, broadcasting and television, and numerous fields such as new retail experiences and digital art consumption.

Fengyuzhu's dynamic capabilities in digital transformation are mainly reflected in the following aspects.

1. Innovation capability: Fengyuzhu continuously explores new display methods and experience modes, combines technology and creativity, and creates a unique digital experience space. For example, in the cultural and brand digital experience space business, the company deeply integrates creative, design, digital art, and immersive experience elements into cultural brand themes, local cultural characteristics, and brand image, creating a new type of interactive

experience space open to the general public and consumers.

2. Adaptability: Fengyuzhu can quickly adjust and optimize its business structure and model according to market demand and changes. For example, in the urban digital experience space business, the company showcases the historical and cultural heritage, development history, construction achievements, and future planning vision of the city through digital technology. This not only meets the needs of local governments, but also adapts to the trend of urban planning display and urban image promotion.

3. Strategic decision-making ability: During the development process, Fengyu Building is able to formulate and adjust strategic decisions based on industry trends and its own characteristics. For example, in the digital product and service business, the company integrates holographic imaging, naked eye 3D, CGI special effects, digital sandbox, stereo projection technology, virtual reality, dynamic cinema special effects, multimedia interaction technology, and outputs through media forms such as AR/VR/MR, 4K/8K ultra high-definition video, to create immersive scenes and digital spaces according to customer requirements.

4. Human resource management ability: Fengyuzhu attaches great importance to talent cultivation and team building, continuously attracting and cultivating professional talents to enhance the company's innovation ability and competitiveness.

The dynamic capability of Fengyuzhu's enterprise is reflected in its innovation ability, adaptability, strategic decision-making ability, and human resource management ability, among other aspects. These abilities jointly promote the continuous transformation and development of the enterprise and the enhancement of market competitiveness. In addition, adaptability enables it to maintain competitiveness in a constantly changing market environment. The company is able to adjust its strategy and business model in a timely manner to adapt to market changes and customer needs. This adaptability helps the company maintain a stable development trend and improve corporate performance. Strategic decision-making ability enables it to formulate scientific and reasonable strategic plans, and effectively implement and control them. The company is able to develop strategies that meet market demand and development direction based on industry trends and its own characteristics, thereby improving corporate performance. According to the financial data of Fengyuzhu over the years, provided by Sina Finance, its operating revenue increased by 96.13% from RMB 1.499 billion to RMB 2.94 billion between 2017 and 2021 (Sina Finance, 2023c).

The dynamic capabilities of Fengyuzhu in the continuous transformation process have a positive impact on its corporate performance. By continuously improving its innovation ability, adaptability, strategic decision-making ability, and human resource management ability,

Fengyuzhu can enhance its market competitiveness, achieve sustainable development, and achieve better corporate performance.

4.2.2 Case study of Frontop Digital Creative Technology

Guangzhou Frontop Digital Creative Technology Co., Ltd. (hereinafter referred to as "Frontop") was established in 2002. It is a comprehensive provider of digital creative products and digital integration solutions, providing one-stop digital creative services such as 3D digital content production, software development, comprehensive design, and system integration. It is widely used in fields such as architectural design, cultural heritage, science and education popularization, smart cities, industrial and cultural tourism, and cultural and sports activities. Frontop continues to focus on cutting-edge technologies such as AIGC, AI algorithms, BI big data, WEB3D, to strengthen and expand products such as digital twins, virtual humans, and knowledge graphs, and explore the digital intelligence exhibition hall (Frontop Digital Creative Technology, 2024).

Digital transformation means that enterprises need to quickly adapt and respond to market changes. Frontop has the ability to quickly iterate and adjust strategies, processes, and technologies to meet constantly changing customer needs and market trends. They can enhance agility by strengthening the culture of innovation, establishing agile development methods and teams, and working closely with various stakeholders. Digital transformation cannot be achieved without advanced technology and tool support. Frontop continuously pays attention to the development trends of emerging technologies and timely applies them to its own business and processes. They can strengthen their technology driven capabilities and maintain a leading position in the field of digital technology by establishing technology innovation teams, collaborating with technology partners, and cultivating technical talents (Frontop Digital Creative Technology, 2024).

The key to digital transformation lies in the effective utilization of data. Frontop needs to establish a data-driven decision-making and operational model that can collect, analyze, and utilize big data to drive business growth and efficiency improvement. They can establish a data analysis team, introduce advanced data analysis tools and technologies, strengthen data management and governance, to maximize the value of data in digital transformation. Digital transformation requires enterprises to undergo changes in organizational structure, culture, and personnel capabilities. From the perspective of dynamic capabilities, the digital transformation of Frontop focuses on aspects such as agility, technology driven, data-driven, and organizational change. By continuously strengthening these key capabilities, Frontop can better respond to

market changes, improve resource allocation efficiency, and achieve successful and sustainable digital transformation. This research presents, from a dynamic perspective, the process of Frontop's creative learning and application of new digital technologies to reconstruct the business model twice in the form of a chart, as shown in Figure 4.2:



Figure 4.2 Dynamic capability structure of Frontop's digital transformation

Based on "3D video products and services", Frontop continuously perceives, judges, learns and applies new digital technologies, reconstructs new business service models, expands service boundaries, and enhances the company's revenue and influence through a dynamic capability structure diagram. Frontop's annual reports from 2017 to 2021 indicates that, during two uninterrupted digital transformations, Frontop closely monitors the latest digital technology trends related to its business, such as artificial intelligence, big data, cloud computing, and the Internet of Things, to determine which technologies can be used to improve or innovate business models. Based on market demand, industry trends, and its own conditions, Frontop formulates digital strategies, clarifies goals, tasks, and timelines, and provides digital technology training for employees. To enhance their understanding and application ability of new technologies and processes, actively recruit talents with digital skills and experience, who can provide new perspectives and ideas to help improve existing business models. Utilize digital technology to develop innovative products or upgrade existing products to meet customer needs and enhance enterprise competitiveness. By applying digital technology, optimizing business processes, improving efficiency and quality. Establish partnerships with relevant enterprises to jointly develop solutions to address market challenges and improve business performance. Utilizing digital technology to enhance customer experience, such as providing personalized products and services, achieving online customization, to enhance customer satisfaction and brand power. Develop clear performance evaluation standards to measure the results of digital transformation. This can help the company understand whether the transformation is proceeding as planned and make adjustments as needed. Continuously learning and improving, paying attention to industry trends and best practices to maintain a competitive advantage. From 2017 to 2021, Frontop applied digital technology and restructured its business model through the above learning, resulting in a growth of 129.03% in business revenue over a five-year period (Sina Finance, 2023b).

4.2.3 Case study on Silk Road Vision

Silk Road Vision Technology Co., Ltd. (stock code: 300556) was established in 2000 and headquartered in Shenzhen, China. As a national professional digital vision comprehensive service provider, Silk Road Vision is based on the visual technology and application industry, focusing on the CG application field. With creativity as the core and market demand as the guide, it mainly uses computer graphics and image technology for visual design and creation. Combining CG technology with art, relying on long-term accumulated technical strength and forward-looking creative design capabilities, it provides services for architecture, design, exhibition halls, advertising, animation Film and television, cultural and entertainment activities, provide digital visual comprehensive services covering CG static, CG dynamic, and CG visual scene businesses (Silk Road Vision, 2024).

In terms of dynamic capabilities, Silk Road Vision has technological advantages and team size advantages. The company is based on computer graphics and image processing technology, with 3D technology as the core, continuously meeting customer and business needs. At the same time, the team size advantage of Silk Road Vision has also brought more projects and development opportunities, which is conducive to improving employee loyalty and project development capabilities. In addition, Silk Road Vision also has business and industry advantages. The company provides customers in industries such as exhibition, advertising, animation, games, film and television, cultural and entertainment with comprehensive digital visual services covering static, dynamic, and scene integration, as well as other types. With the development of computer technology, dynamic visual experiences are becoming increasingly popular, and Silk Road Vision has also shown impressive performance in this field. Silk Road Vision has strong capabilities and advantages in dynamic capabilities, constantly adapting to

market changes and customer needs, enhancing its competitiveness and innovation ability, increasing the company's own revenue and social reputation. This research presents the application of new digital technologies in Silk Road Vision learning and restructuring of the business model from the perspective of dynamic capabilities in the form of charts, as shown in Figure 4.3 below.



Figure 4.3 Diagram of dynamic capability structure for Silk Road Visual digital transformation

The dynamic capability process diagram shows that Silk Road Vision is based on "static vision", constantly perceiving, judging, learning and applying new digital technologies, reconstructing new business service models, expanding service boundaries, and enhancing the company's revenue and influence. In recent years, the digital economy has developed rapidly, focusing on two main lines: digital technology and market demand. Silk Road Vision has formed three main businesses: design visualization, digital marketing, and exhibition display. Based on "static vision", the visual approach involves two reconstructions of business service models, successfully expanding service boundaries, increasing enterprise performance, enhancing brand power, and integrating digital technology with the dynamic capabilities of the enterprise.

Silk Road Vision is able to quickly respond to market changes is primarily due to its strong ability in perception and judgment, namely it has keen insight into the environment through multiple channels and learning technology. It mainly reconstructs its business model from the following three channels.

Firstly, digital transformation adopts technologies such as cloud computing, big data, and

artificial intelligence; Allow enterprises to store data and applications in the cloud for remote access and management. Reduce IT costs for enterprises, collect and analyze massive amounts of data to discover business insights, optimize operations, predict market trends, use artificial intelligence for automated processes, achieve personalized recommendations, and make intelligent decisions. User experience optimization, utilizing user behavior data to establish user profiles and provide personalized products and services to users.

Secondly, product and service innovation, enterprises can develop innovation strategies based on market demand and utilize digital technology to develop new products or services. For example, the Internet of Things can be used for smart home products, and virtual reality technology can be used for exhibitions. By adopting data-driven decision-making, enterprises can obtain key insights through data mining and advanced analytical tools to support their business decisions. This can improve the speed and accuracy of decision-making, thereby enhancing the competitiveness of the enterprise.

Thirdly, open innovation can expand its innovation boundaries and introduce new innovative ideas through collaborative innovation with partners. In addition, open APIs can help businesses connect with other companies or developers, share resources, expand service scope, build digital ecosystems, use digital platforms to connect various stakeholders (such as customers, suppliers, partners), share data and resources, collaborate and innovate, thereby creating a competitive digital ecosystem. Through the various organizational processes and capabilities mentioned above, Silk Road Vision completes business restructuring and adapts to the dynamic changes in the market. It always quickly and flexibly adapts to the direction of the market, reflecting quickly and flexibly in different technologies. The continuous restructuring of Silk Road Vision's business is reflected in the rapid growth of business revenue in its reports. From 2018 to 2022, the operating revenue increased from 723 million to 1.291 billion, with a five-year growth of 78.56% (Sina Finance, 2023a).

4.2.4 Results and discussion of multi-case studies

Through multiple case studies, it has been found that dynamic capabilities have a significant impact on corporate performance. Analyzing the relationship between the dynamic capabilities and performance of three companies, Fengyuzhu, Silk Road Vision, and Frontop, it was found that all three companies have significant advantages in dynamic capabilities. These companies are able to quickly adjust their capabilities and resources to adapt to market changes and seize market opportunities to achieve better performance in the face of complex and changing market environments. The research results indicate that dynamic capabilities have a positive effect on

improving corporate performance, but it should be noted that dynamic capabilities are not static. Enterprises need to continuously adjust and improve their dynamic capabilities in the constantly changing market environment to maintain a sustained competitive advantage.

Although it has revealed to some extent the impact of dynamic capabilities on corporate performance, there are still some limitations due to the limitations of research time and resources. Firstly, we mainly focused on the advantages of the three companies in terms of dynamic capabilities, but failed to comprehensively analyze other factors that may affect corporate performance. In the future, we can further explore the mechanisms of other influencing factors; Secondly, the focus is mainly on the impact of dynamic capabilities on corporate performance at the current stage. In the future, research can be focused on the long-term impact of dynamic capabilities on corporate performance and the evolution laws of dynamic capabilities.

4.3 Summary of the chapter

This chapter is mainly divided into two sections. The first section mainly conducts empirical research on Fengyun Enterprises, uses statistical analysis software SPSSUA to analyze the survey questionnaire data, tests the proposed hypotheses, and discusses the results. Before conducting hypothesis testing, reliability and validity tests were conducted on the sample data, and the results showed that the sample data met the requirements. This section uses stepwise regression analysis for hypothesis testing, and empirical analysis results show that perceived judgment ability, acquisition ability, and reconstruction ability all have a positive impact on corporate performance in the digital transformation of decoration enterprises. The 23 hypotheses proposed in this section, of which 22 were ultimately supported by data, reveal the impact of digital transformation dynamic capabilities of decoration enterprises on corporate performance. Finally, the data analysis results are discussed.

In the second section of this chapter, the main focus is on the research of three digital decoration industry enterprises, Fengyuzhu, Frontop, Silk Road Vision, and their visual ideas. The theoretical models and research hypotheses proposed earlier are applied and verified. The application verification results show that perceptual judgment ability, learning absorption ability, knowledge application ability, and organizational restructuring ability all have a positive impact on the performance of decoration enterprises in the continuous digital transformation.

Chapter 5: Conclusion and Outlook

5.1 Main findings

The research studies on how the decoration enterprises apply dynamic capabilities to achieve sustained competitive advantage in digital transformation, particularly, how the dynamic capabilities promote sustained competitive advantage. Based on previous researches, this study focuses research on dynamic capabilities of enterprises. On the establishment of dynamic capability system for decoration enterprises, and the analysis of its mechanism of action, this study proposes a three-dimensional system of dynamic capabilities in decoration enterprises, abstracts from the main dimensions of dynamic capabilities in each stage of digital transformation, and verifies the scientific and rational nature of this system. At the same time, this study discusses the relationship between sustained profitability and the role of dynamic capability, as well as the role of path dependence in empirical research. Specifically, this study selects the optimal model from trials in various models, and verifies the linear and nonlinear effects of dynamic capability and enterprise performance. The main findings are as follows.

This study first defines the concepts involved in several theories, such as dynamic capability, digital transformation, and path dependence. It eliminates opposition and contradiction among the concepts. Furthermore, starting from the core concept of dynamic capability in enterprises, this study proposes that the role of dynamic capability shall not only promote the formation of competitive advantage in the traditional sense, but also shall promote the maintenance of sustained competitive advantage in enterprise transformation. Therefore, the study proposes the research idea: dynamic capability has a positive significance for enterprise profitability under temporal logic, however, after introducing environmental uncertainty and other influencing factors in the enterprise, the dimensions in dynamic capabilities have a more complex relationship with the sustained competitive advantage in decoration enterprise digital transformation.

This study analyzes the development process of Fengyun Technology, and goes through a review of three development stages. The study finds that transformation in each stage is keenly perceived by management due to the introduction of new digital technologies and corresponding policies. After analysis and judgement, the management believes that it may

bring new models to the development of the enterprise and have the opportunity to enter new markets. Subsequently, the company organizes a dedicated team to learn and absorb new digital technologies and corresponding policies, research how to combine and apply on existing ones, reconstruct new service models, and then attempt on small-scale projects to verify the feasibility of the reconstructed model and its impact on enterprise performance. This study further summarizes the specific performance of digital transformation reflected by various stages of Fengyun Technology, and vertically summarizes the characteristics of decoration enterprises in terms of management system, management mechanism, and corporate culture, and proposes the reasons for digital transformation. On this basis, the research gradually delves deeper and analyzes the evolution cycle of the decoration enterprises strategic path in terms of temporal logic, and proposes the determinations of dynamic capabilities.

Perceptual judgement ability determines the size of the enterprise performance threshold, and is therefore the fundamental dimension for initiating the transformation process. Learning Absorption Ability and Knowledge Application Ability are important driving forces for the gradual replacement and updating of enterprise digitalization, and therefore it is the core dimension that leads digital transformation. Organization Restructure Ability and Strategic Flexible Ability are the enterprise internal selection mechanisms for path plans, and are the standards that determine whether enterprises can choose the correct strategic path. Therefore, the research builds the three-dimensional theoretical model of dynamic capability, and further testing suggests that all three dimensions of dynamic capability mentioned above play an indispensable role in the formation of competitive advantage and enterprise performance. This theoretical model is relatively scientific and reasonable.

The research analyzes from the perspective of basic logic in the role of dynamic capabilities in decoration enterprises, adds subjective uncertainty and factors that affect decision-making conditions, and conducts a single case embedded study on Fengyun Technology located in Xiamen, China. The research conducts in-depth study on the role of dynamic capabilities in the digital transformation of decoration enterprises on enterprise performance, and proposes a linear hypothesis of the various dynamic capability dimensions on enterprise performance. On this basis, the research designed questionnaire survey to explore Fengyun Technology for case study, and further conducted data processing, reliability and validity testing, stepwise regression analysis, and model testing using SPSSAU. The research result indicates the various dynamic capability dimensions of decoration enterprises have a significant positive impact on the enterprise performance in digital transformation. Based on the analysis results, the research proposes a structural system of the dynamic capabilities for decoration enterprises, from the perspective of the entire process of path evolution. The research according to the system continues to explore the characteristics of dynamic capabilities in three decoration enterprises listed in market with varying degrees of digital transformation, namely Fengyuzhu in Shanghai, Frontop in Guangzhou, and Silk Road Vision in Shenzhen, and their advantages in digital transformation. Further verification has shown that all three dimensions of dynamic capability play an indispensable role in the formation of competitive advantage and enterprise performance. The analysis proves the theoretical model is relatively scientific and reasonable.

(1) This research does not extensively discuss the organizational culture, atmosphere, organizational structure, and digital management of the case enterprise. The case enterprises have gone through digital transformation, which shows the organizations have strong learning ability, strong learning atmosphere for new technologies, and a sense of self evolution that can successfully transform. The main purpose of reconstructing a new service model is to help customers improve interaction efficiency, and thus is essentially helping customers adjust their organizational structure and establish a digital management system.

(2) This research used questionnaire survey and interview in the embedded single case study. The questionnaire survey uses Wenjuanxing as an online form to distribute a unified questionnaire to the employees to collect data. Interviews are mainly conducted in-person, with some are conducted by phone interviews.

(3) In the context of areas being urbanized and the construction industry is shrinking, and the traditional decoration market is diminishing, enterprises with strong dynamic capabilities continuously perceive and learn new technologies to reconstruct service models, enter new markets, and form new development. Enterprises with weak dynamic capabilities can only conduct business in old markets, constantly being compressed in market share until eliminated. Thus, the dynamic capability structure of decoration enterprises is related to their development, even their survival or extinction.

(4) Figure 5.1 below shows the three-dimensional theoretical system in the case study performed under the research.



Figure 5.1 The three-dimensional theoretical system

According to the theoretical model proposed by this study, the researcher concludes from the research process with the diagram as the basic unit, indicates digital transformation theory system for decoration enterprises from the perspective of dynamic capabilities.

(5) In interviews with senior management Fengyun Technology, especially the Chairman, the executives are very cautious about the company's transformation. They emphasize the need to establish a dedicated team for learning and research at each step, and emphasize trying on small projects until the model is mature and opportunities are suitable before further expanding. Therefore, this study suggests that decoration enterprises should not blindly enhance various aspects of their dynamic capabilities, especially in terms of enhancing their restructure ability. They should moderately balance between optimal and rapid for strategic path selection, and more cautiously carry out exploration work on transformation. Based on this, this research combines the "new normal" of the economy with the inevitable trend of transformation and upgrading of decoration enterprises, and believes that decoration enterprises shall quickly and prudently improve their dynamic capabilities to cope with the current trend of industry development. Therefore, the research provides strategic suggestions for decoration enterprises to enhance their perception ability, acquisition ability, and restructure ability.

5.2 Research implications

1. From the perspective of digital transformation in decoration enterprises, this research constructs a comprehensive model of the relationship between dynamic capabilities and corporate performance, which improves and supplements the previous relationship between these two items. The existing research on the relationship between dynamic capabilities and corporate performance, mostly analyzes the effectiveness of dynamic capabilities through a single external to internal analysis, or an internal to external analysis. The existing research, for example, simply focuses on the ecological environment and key competitive elements within the enterprise, or simply focuses on the core resources and capabilities inside enterprise that can lead to a success. These studies only focus on one aspect of the utility in dynamic capabilities, lack in systematic integration of the effectiveness of dynamic capabilities.

This study is based on the logical relationship of digital transformation in decoration enterprises, constructs a new theoretical model, and verifies its effectiveness. The model emphasizes the synergy and consistency between dynamic capabilities and various elements. The study further reveals how decoration enterprises can effectively improve their performance through dynamic capabilities.

2. The research has a theoretical inspiration. On the basis of Teece's (1997) dynamic capability research framework, this research further explores the characteristics of decoration enterprises, introduces dynamic capability as a variable, and studies on how to improve performance through dynamic capability in the digital transformation. The aim is to clarify the process of how dynamic capability affects enterprise performance. The theoretical inspiration of this study is making up for the shortcomings in the existing intermediate mechanism between dynamic capability and corporate performance of decoration enterprises.

3. The research has some practical implications. This research studies case company from the perspective of dynamic capabilities. Fengyun Technology grows from an ordinary decoration company to mainly engaged in the decoration of exhibition halls (buildings), and then focuses on the needs of customers to improve interaction efficiency. Fengyun Technology constantly perceives and acquires rapid development in digital technology, reconstructs the business service model, thereby expands business boundaries, improves performance, and brings rapid development to the enterprise. In the context of current urbanization, together with the shrinking market of traditional decoration industry and increasing competitive in the market, this study explores an effective path for decoration enterprises to improve their sustainable competitiveness. 4. The research has some social implications. Whether it is a decoration enterprise or other enterprises, enhancing dynamic capability is beneficial for expanding their client base, improving production efficiency and overall performance. The dynamic capability also increases employment rates, increases government tax income, and promotes the development of the entire society.

5. The research focuses on the most critical point, which makes concision in the strategic recommendation section. This study focuses on decoration enterprises and researches whether the utility of dynamic capabilities depends on coordination with the external environment, internal resources, technology and capability transformation mechanism, and the strategic choices of the enterprise.

5.3 Research shortcomings and lines for future research

Due to limitations in research time and the availability of several specific resources during the empirical research process, the study has some limitations in the research content, and some areas that can be expanded and possible future research directions.

(1) During the research process, this study selected corporates from four economically developed cities in southern China as case sources, namely Xiamen, Shanghai, Guangzhou, and Shenzhen, which has potential limitations. Although empirical analysis supports the proposed research model and theoretical hypothesis, the concern raises whether similar conclusions still exist in decoration enterprises in northern, central, and western regions of China. Another concern is whether any differences among different regions and any other issues shall be studied.

(2) The single case study in this research used online questionnaire and interview to collect data, which comes with limitations. Although this method acquires first-hand information in detail, it often has a high degree of subjectivity, and thus may affect the accuracy of the results. In order to reduce potential limitations, researchers prepared in setting the scope of the questionnaire. The majority of the respondent are management personnel above the level of deputy department managers and a few technical backbones who has been working for a long time, all of whom were closely related to or witnessed the transformation. The researcher also selected the interviewees carefully, particularly interviewing key personnel such as the chairman, president, vice president, and strategic department manager. In multi-case studies, the study was not able to conduct questionnaire or interviews with middle and senior management of the three case companies, but research has conducted through public available annual reports and data from official website, which is not very comprehensive.

(3) The four case companies are all highly dynamic and mature in digital transformation, thus this research focuses on applying new digital technologies to reconstruct business models and enter new markets, and improve customer interaction efficiency. In the process of transformation, enterprise performance may be influenced not only by the above variables, but also by many factors such as the company's organizational culture, atmosphere, structure, and digital management transformation. Due to the page limits, this research did not extensively discuss this topic. Although it has been comprehensively considered, limitations still exist.

(4) The number of case study is only four enterprises, and distributed in four cities, which is not enough to fully represent of the overall situation in China. The scope of data collection in single case study is only 68 individuals, which is not fully represent the true expression of employees and those who have left the company but have a critical impact on it. The survey questionnaire is a standard multiple-choice question, and the respondents cannot fully express their opinions. Although 10 senior and middle-level managers were interviewed, the content expressed was different due to the different positions, experiences, and perspectives of each individual. Due to business secret protection, the researchers were unable to conduct investigations or interviews with the customers and suppliers of the case companies. These constraints have a potential impact on the comprehensiveness of the research.

With the widespread use of big data collection and analysis methods, as well as the widespread adoption of enterprise information management systems, the collection of objective data will become gradually easy. Therefore, in the future, big data analysis can be used to conduct more extensive, scientific, and objective research to make up for the limitations of the above research and minimize potential impacts.

During the research process, only companies from economically developed cities in southern China were selected as case sources. Although empirical analysis supports our proposed research model and theoretical hypothesis, similar conclusions may still doubt whether exist in decoration enterprises in northern, central, and western regions of China. Therefore, future research can delve deeper into these regions to obtain corresponding samples and draw more reliable conclusions. It is also possible to use decoration enterprises from different regions and ethnic minority autonomous regions as research cases to study the impact of dynamic capabilities on the digital transformation of decoration enterprises from different perspectives, that will provide a more comprehensive understanding.

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