MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
V.N. KARAZIN KHARKIV NATIONAL UNIVERSITY

Name of the faculty	**EDUCATION AND RESEARCH INSTITUTE "KARAZIN BANKING INSTITUTE"**
Name of the department	**Management, Business and Professional Communications**
Specialty:	**073 Management**
Educational program:	**Management of Organizations and Administration**
Group:	**AM-25M (full-time mode of study)**

QUALIFYING MASTER'S THESIS

on the topic:

MANAGEMENT OF THE COMPANY'S INNOVATION ACTIVITIES

student of higher education **Qin Hao**

The work is accepted for defence in the EC

Head of Department
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Kharkiv 2024

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(initials, last name)

25 September 2024

TASK
FOR A QUALIFYING MASTER'S THESIS
Qin Hao

1. Topic of work: "MANAGEMENT OF THE COMPANY'S INNOVATION ACTIVITIES".
Scientific adviser Nadiia Morozova, PhD in Economics, Associate Professor
(full name, academic degree, academic title)
Approved by order of the university dated September 17, 2024 № 4601-5/1025.

2. The deadline for student submission of work November 18, 2024.

3.List of topics to be developed:

• In Chapter 1: to explore the conceptual framework for managing the company's innovation activities; to analyze the economic essence and peculiarities of managing the company's innovation potential; to investigate the organization of innovative activities of companies based on sustainable development principles.

• In Chapter 2: to examine trends in innovation development in China; to provide technical and economic characteristics of the company Mei Tuan; to conduct an integrated assessment of Mei Tuan's innovation potential.

• In Chapter 3: to propose strategic directions for innovative development in the context of sustainable development; to analyze the implementation of digital and green

technologies in innovation management; to suggest ways to enhance collaboration and partnerships for sustainable innovation.

4. Plan of qualifying master's thesis

№	Names of work sections
1	THEORETICAL FOUNDATIONS OF MANAGING THE COMPANY'S INNOVATION ACTIVITIES
2	ANALYSIS OF THE CURRENT STATE OF INNOVATION DEVELOPMENT
3	PROSPECTS FOR THE DEVELOPMENT OF INNOVATIVE ACTIVITIES OF COMPANIES IN THE FRAMEWORK OF SUSTAINABLE DEVELOPMENT

5. Date of issue of the task September 25, 2024.

Student _____ Qin Hao
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Scientific Adviser _____ Nadiia Morozova
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ABSTRACT

The qualifying master's thesis contains 60 pages, 5 figures, 4 tables, and a list of 44 references.

The object of research is the company Mei Tuan.

The subject of research is the management of the company’s innovation activities, focusing on strategies and practices for sustainable development.

The purpose of the master's thesis is to develop scientific and practical recommendations for enhancing Mei Tuan’s innovation management system to improve operational efficiency, foster long-term competitiveness, and support sustainable development initiatives.

Tasks of a qualifying master's thesis include:

- to explore the conceptual framework for managing the company's innovation activities;
- to analyze the economic essence and peculiarities of managing the company's innovation potential;
- to investigate the organization of innovative activities of companies based on sustainable development principles;
- to examine trends in innovation development in China;
- to provide technical and economic characteristics of the company Mei Tuan;
- to conduct an integrated assessment of Mei Tuan's innovation potential;
- to propose strategic directions for innovative development in the context of sustainable development;
- to analyze the implementation of digital and green technologies in innovation management;
- to suggest ways to enhance collaboration and partnerships for sustainable innovation.

The research outcomes contribute to the theoretical understanding of innovation management and provide practical principles for improving corporate innovation systems. The recommendations proposed in the thesis include actionable strategies for

Mei Tuan to optimize its innovation processes, integrate sustainable practices, and strengthen its market position.

The obtained results have practical implications that extend beyond Mei Tuan, offering valuable insights for other companies seeking to enhance their innovation activities in the digital economy while adhering to principles of sustainable development. These findings are particularly relevant in the context of rapid technological advancement and increasing global emphasis on sustainability.

Year of completion of the qualifying master's thesis: 2024.

Year of defense of the qualifying master's thesis: 2024.

CONTENT

INTRODUCTION

In the context of intensifying global environmental challenges, the integration of sustainable practices into corporate operations has become an essential aspect of modern business strategy. Climate change, resource depletion, and the increasing demand for environmentally friendly products and services are compelling enterprises to adopt green innovations. Simultaneously, the rapid proliferation of digital technologies offers transformative potential to enhance operational efficiency, foster innovation, and create sustainable solutions. The convergence of these two paradigms—green innovation and digital transformation—is emerging as a pivotal approach for businesses seeking long-term competitiveness and sustainability.

The critical need to address these challenges is evident across various sectors. As industries strive to achieve decarbonization and reduce their ecological footprints, the role of innovation management becomes increasingly prominent. The deployment of digital tools such as artificial intelligence, big data analytics, and blockchain has proven instrumental in driving resource optimization and sustainable practices. However, realizing the full potential of this integration requires a systematic framework that aligns corporate strategies with environmental and technological imperatives.

This study selects Meituan, a leading lifestyle services platform in China, as a case study to explore the intersection of digital and green technologies in corporate innovation management. Meituan's strategic initiatives, which combine cutting-edge digital transformation with sustainability objectives, offer valuable insights into how enterprises can adapt to the dual demands of competitiveness and environmental stewardship. As a pioneer in digital logistics and green technology, Meituan exemplifies the potential of integrating sustainability into business operations at scale.

Globally, the adoption of green technologies is being driven by regulatory frameworks, consumer preferences, and market pressures. Governments worldwide

are implementing stringent environmental policies and offering incentives for businesses to adopt sustainable practices. Concurrently, consumers are demonstrating a growing willingness to support eco-friendly brands, creating market opportunities for companies that prioritize sustainability. These trends underscore the relevance of this research in examining how businesses can harness digital technologies to accelerate their transition toward green innovation.

Meituan's leadership in the lifestyle services sector positions it as an ideal candidate for this study. The company's extensive use of data-driven technologies, coupled with its commitment to green initiatives, reflects a model that other enterprises can emulate. This research investigates Meituan's approach to innovation management and evaluates its effectiveness in achieving sustainability objectives.

The academic discourse on sustainable innovation highlights the importance of aligning technological advancements with environmental goals. This study builds on theoretical frameworks such as the Triple Bottom Line (TBL), which emphasizes the balance between economic, social, and environmental dimensions, and open innovation models that advocate for collaborative approaches to resource optimization.

The primary objectives of this research are:

1. To analyze the integration of digital technologies and green innovations in enhancing corporate competitiveness.
2. To evaluate the role of innovation management in fostering sustainable practices at Meituan.
3. To identify strategies for scaling such integrations across different industries.
4. To propose actionable recommendations for enterprises aiming to achieve sustainability through innovation.

Through a combination of literature review, case analysis, and quantitative evaluation, this study aims to provide a comprehensive understanding of the dynamics between green and digital innovation. The findings are expected to

contribute to academic literature, inform policy-making, and guide corporate strategies in sustainable innovation management.

The innovation of this research lies in its dual focus on academic and practical dimensions. Academically, it contributes to the growing body of literature on green innovation and digital transformation, offering a nuanced perspective on their interplay. By contextualizing these theories within the framework of innovation management, this study advances understanding of how enterprises can align their strategies with sustainability imperatives.

Practically, the findings offer actionable insights for businesses navigating the challenges of a rapidly changing global landscape. The recommendations derived from Meituan's practices are intended to serve as a blueprint for enterprises seeking to integrate green and digital innovations effectively.

In conclusion, the integration of digital and green technologies represents a transformative opportunity for enterprises to address the complex challenges of the 21st century. By focusing on Meituan's innovative management practices, this study seeks to illuminate pathways for achieving sustainability and competitiveness in an increasingly interconnected world.

CHAPTER 1
THEORETICAL FOUNDATIONS OF MANAGING THE COMPANY'S INNOVATION ACTIVITIES

1.1 Conceptual framework for managing the company's innovation activities

Enterprise innovation activity management is to promote continuous innovation of technology, products, processes and business models through systematic strategy, resource allocation, incentive design and risk management to enhance long-term competitiveness of enterprises and achieve sustainable development [1]. The management of innovation activities includes not only the selection and implementation of projects, but also requires the integration of cross-sectoral resources to maximise the value of innovation realisation at the economic, environmental and social levels.

In a global market environment, corporate innovation is faced with rapid technological change, frequent changes in market demand and growing demands for sustainable development. Innovation management needs to be able to flexibly allocate resources and adjust strategies to ensure the continuous promotion and efficient operation of innovation activities. The framework for enterprise innovation management covers the following key elements:

1.1.1 Strategic Orientation and Innovation Path Selection

The first task of innovation management is to define strategic objectives to ensure that innovation activities are aligned with the overall development strategy of the organisation.The innovation strategy should be based on market demand, technological trends and the core competitiveness of the enterprise to choose the appropriate path, taking into account short-term gains and long-term technology accumulation [2]. For example, Meituan's innovation path revolves around the

changing needs of users, and it has demonstrated its foresight in strategic direction by enhancing the takeaway experience through smart technology.

1.1.2 Resourcing and application of digital tools

Resource allocation is the key to innovation management, covering the rational allocation of financial, human and technological resources [2]. Enterprises not only need to optimise internal resources, but also expand resource channels with the help of external means such as technological cooperation, mergers and acquisitions, etc., to improve innovation efficiency. With the advancement of digital technology, big data and artificial intelligence have become important tools for resource allocation, through which enterprises can more accurately analyse market demand and resource efficiency, so as to optimize resource allocation. For example, an automotive manufacturer optimised its production process through big data, focusing resources on high-potential R&D projects, significantly shortening the time-to-market cycle of new products and improving resource utilisation.

Open innovation helps enterprises to acquire new technologies and solutions through external resources (e.g. supply chain, partners, research institutions). In the process of technological innovation, the introduction of external resources can make up for the lack of internal resources, reduce R&D costs and accelerate the transformation of innovation results.

1.1.3 Multi-level incentive design

Effective incentive mechanism is the power source of innovative activities. Enterprises usually use short-term incentives such as equity and bonus to motivate employees, but short-term incentives need to be combined with long-term incentives [2]. Long-term incentives guide employees to focus on short-term goals while investing in the long-term innovative development of the enterprise through career development, cross-departmental co-operation opportunities and innovation culture shaping [2].

Incentive design in knowledge-intensive firms. In knowledge-intensive enterprises, innovation relies on the accumulation of employees' expertise, so

incentive mechanisms should be diverse. For example, a technology company fully mobilises the innovation potential of its employees through equity incentives and a flexible bonus mechanism, enabling them to achieve breakthrough results with limited resources.

1.1.4 Risk management and dynamic adaptation of processes

Innovation activities are usually accompanied by high risks, especially in technological fields with high uncertainty. When managing innovation activities, enterprises must establish an effective risk management mechanism to identify, assess and respond to potential risks in the innovation process. Regular risk assessment and monitoring of innovation progress can help enterprises make timely adjustments to their innovation projects and ensure that project risks are under control.

1.1.5 Evaluation and feedback mechanisms for innovative activities

Evaluation and feedback mechanisms are an important part of innovation management. By establishing a scientific innovation performance assessment system, enterprises can better measure the results and value of innovation. Innovation assessment should not only focus on financial returns, but also consider the contribution of innovation to the strategic objectives of the enterprise, the breadth and depth of technological breakthroughs, and the enhancement of the enterprise's competitiveness.

An effective feedback mechanism can provide valuable experience and guidance for future innovation activities. For example, a biotechnology company has adjusted the direction of its projects in a timely manner through regular risk assessments during the R&D process, effectively reducing the likelihood of technological failure and ensuring the continuity of innovation activities.

1.2 Economic essence and peculiarities of managing the company's innovation potential

1.2.1 Theories of innovation

Innovation The word is derived from the Latin word "innovare", where "nova" means "new" and the prefix "in The prefix "in" is a verbalisation, which as a whole means "to renew" or "to make something new". This suggests that innovation is not just about introducing something new, but also about renewing and transforming what is already there.

In 1912, the American economist Schumpeter put forward the concept of innovation, which was realised by constructing a brand new production function, thus laying the foundation of innovation theory [17]. Since then, innovation has become one of the core theories in the fields of economics and management, and the issue of innovation has received increasing attention from scholars. In 1994, two British scholars, Braun and Wield, put forward the concept of "green technological innovation", which they believe refers to a kind of production technology that can effectively reduce environmental pollution and save resources [18]. This idea has received attention from academics and since then, green technology innovation has gradually become one of the hot spots of research at home and abroad. 1996, Fussler firstly integrated green elements into the innovation process in the article "Driving Green Innovation", focusing on the benefits of innovation to the environment, and put forward the theory of "green innovation" [16]. theory [16]. In 2000, Rennings further expanded the theory of green technological innovation, dividing it into product green innovation and process green innovation. Newly created products, technologies, services and processes are all green technological innovations aimed at protecting the environment, and this viewpoint has been widely recognised and accepted [19].

1.2.2 The economic nature of the potential for innovation

(1) Resource scarcity and maximising the benefits of innovation

One of the economic essences of a firm's innovation potential is to maximise the return on its innovation activities through the effective management of scarce resources. The scarcity of innovation resources, especially key elements such as capital, manpower and technology, requires firms to optimise the allocation of resources in order to maximise economic returns.

a. *The Role of Digital Transformation.* Enterprises use digital technologies to improve the efficiency of resource use, optimise the allocation of innovation resources with the help of big data and smart analytics tools, reduce resource wastage and ensure that scarce resources are used for the most promising innovation projects. For example, a multinational manufacturing company has successfully shortened its time-to-market and improved its innovation efficiency by optimising its R&D processes through digital transformation and using data analytics to focus resources on high-potential innovation projects.

b. *Integration of capital and external resources.* Through external cooperation and technology introduction, enterprises can make up for the lack of internal resources and maximise returns through the rational allocation of capital. Strategic resource integration can increase the economic returns of innovation activities.

c. *Human Resource Motivation and Management.* With limited human resources, incentives become an important means to release the innovation potential of employees. An Internet company has fully mobilised its employees' motivation to innovate through equity incentives and a flexible bonus mechanism, achieving breakthrough technological innovations and significantly increasing its market share with a limited team size.

(2) Technological advances and productivity gains

Another economic essence of the potential for innovation is to enhance productivity through technological advances and achieve long-term economic growth for firms. Technological innovation not only drives productivity gains, but can also help firms to gain a favourable position in the marketplace.

a. *Technology Accumulation and Knowledge Management.* Enterprises ensure the effective release of innovation potential through continuous technology accumulation and knowledge management. A sound knowledge-sharing system can help enterprises improve innovation efficiency and achieve continuous technological progress.

b. *The driving role of green technological innovation.* Promoting green technology innovation helps enterprises to achieve sustainable development while maintaining economic growth. For example, by investing in renewable energy technologies, an energy company has not only reduced its production costs, but also significantly improved its market position in the area of energy conservation and environmental protection by optimising the efficiency of energy use.

(3) Innovative features of high risk and high reward

The economic nature of the innovation potential of firms is also reflected in the balance between high risk and high reward. Innovative activities are usually accompanied by a high degree of uncertainty, but when successful, the economic rewards are often significant.

a. *Capital Management and Risk Control.* Firms reduce financial risks in innovation by optimising their capital structure (e.g. dual shareholding structure) and ensure that limited capital is used for high-potential projects, thus maximising returns on innovation outcomes.

b. *Unlocking the Potential of Innovation Returns.* Despite the risks associated with innovation activities, firms can unlock the potential for innovation in the midst of uncertainty and realise high returns through effective risk assessment and management mechanisms.

1.2.3 Characteristics of innovation potential

(1) Dynamism and uncertainty

Firms' innovation activities are highly dynamic and uncertain, with innovation potential constantly adjusting to market changes and technological advances.

Enterprises need to have the ability to respond flexibly to changes in market demand in order to maintain the continuity of their innovation activities.

a. *Dynamic adjustment mechanisms.* Firms should have a flexible adjustment mechanism for their innovation strategies to cope with rapid changes in technology and markets. The ability to adjust dynamically can help firms to seize innovation opportunities in the midst of uncertainty and realise a sustained release of potential.

b. *External Co-operation and Resource Integration.* By collaborating with external organisations, firms are able to respond flexibly to market changes and drive innovation progress through the integration of external resources. This flexibility enables firms to quickly adjust their innovation strategies and maintain a competitive advantage.

(2) Long-term cyclicality and strategic vision

The unleashing of innovation potential usually takes a long time, especially in terms of technological innovation and R&D investment. It is important for firms to have a long-term strategic vision when managing innovation potential to ensure the continuity of innovation activities.

a. *Long-term capital investment and strategic planning.* Firms need long-term capital investment to support the development of innovation activities, which requires a strategic vision in innovation management and the ability to wait patiently for innovation to pay off.

b. *Continuous technology accumulation.* The accumulation of technology and the release of innovation potential has a long cycle, enterprises should establish a perfect R & D system to ensure continuous technology reserves and future innovation ability.

(3) High input-output ratio and metrics

Innovation potential is measured not only by the amount of resources invested, but also by the effective use of resources and the value of the final output. The

innovation management of an enterprise needs to be assessed through specific economic indicators to unleash its innovation potential.

a. *Input-output ratio.* By analysing the input-output ratio of innovation activities, firms can assess the efficiency of their management of innovation potential. A high input-output ratio means that a firm is able to maximise the benefits of innovation with the least amount of resources.

b. *Accumulation of patents and technological achievements.* The number of patents and technology reserves is one of the measures of an enterprise's innovation potential. Through the accumulation of intellectual property rights and technological achievements, enterprises can continuously improve their market competitiveness and maximise their innovation potential.

1.3 Organization of innovative activities of companies on the basis of sustainable development

1.3.1 Integration of sustainable development and business innovation

The economy, society and the environment are the three pillars of sustainable development, and business innovation plays a key role in promoting a balance between these pillars. In essence, sustainable development is a dynamic process of reconciling economic growth, social welfare and environmental protection. Over the past 30 years, the concept of "sustainable development" has gradually shifted from a focus on economic and social goals to a greater emphasis on environmental protection. However, while achieving economic goals, companies must innovate to meet the needs of society and the environment.

Through technological innovation and changes in business models, enterprises can achieve breakthroughs in resource efficiency, pollution control and product sustainability. In order to achieve coordinated development of economy, society and environment, enterprises not only need to set up "ecological thresholds" through innovation to limit resource consumption and reduce environmental burdens, but also

need to innovate social welfare mechanisms and set up "welfare thresholds" to ensure that economic growth can enhance There is also a need to innovate social welfare mechanisms and establish "welfare thresholds" to ensure that economic growth enhances employee welfare and social equity. Such integration enables enterprises to pursue economic efficiency while also achieving greater social and environmental sustainability.

1.3.2 Innovation management models based on sustainable development principles

In the context of sustainable development, corporate innovation management needs to balance economic efficiency, environmental responsibility and social responsibility. The following innovation management models and theories provide practical paths for enterprises to help them achieve their green innovation goals.

(1) triple bottom line model (TBLM)

The concept of triple bottom line (TBL) was first proposed by British scholar John Elkington, and its core idea is to achieve sustainable development by balancing the economic performance, environmental performance and social contribution of enterprises. This concept combines the profitability goals of enterprises with social and environmental responsibility, which makes up for the inadequacy of purely pursuing economic benefits [3]. From a macro perspective, TBL provides a framework for corporate strategy formulation and value shaping, prompting companies to take into account the needs of stakeholders in the process of creating economic, social and environmental value and minimising the negative impacts of their activities. From a micro perspective, companies should not only pursue economic goals, but also social and environmental goals, and on the basis of fulfilling their economic, environmental and social responsibilities, they should use this framework to measure their performance and ensure that their behaviours are in line with the requirements of the Triple Bottom Line (TBL). By integrating the TBL model into the management of innovation activities, companies can drive economic

growth while reducing environmental damage and enhancing their social responsibility.

(2) Open Innovation Model

The open innovation model, proposed by Henry Chesbrough in 2003, emphasises that firms drive innovation activities by opening up their internal boundaries and integrating external resources and knowledge. This model breaks with traditional closed innovation by enabling firms to have more flexible access to new technologies and solutions, especially in green technologies and sustainable development, through resource sharing with external partners, supply chains and academic institutions[6].

(3) Ambidextrous Organization Model

The Lean Innovation Management theory, which originates from Toyota's production system, emphasises the promotion of corporate innovation by reducing waste, rationalising the allocation of resources and improving efficiency. The theory seeks to help companies reduce their environmental impact while achieving green innovation by streamlining processes and reducing resource consumption.

For example, an electronics manufacturing company applied Lean Innovation Management to optimise its supply chain processes, significantly reducing material and energy waste while improving the environmental performance of its products. By compressing resource consumption and shortening development cycles, Lean management not only improves the company's economic efficiency, but also significantly enhances its environmental performance.

In addition, Lean Innovation Management can be combined with an open innovation model to bring in external resources to acquire green technologies and to optimise the application of these technologies internally to ensure a more rational and efficient allocation of resources.

(4) Lean Innovation Management

The Lean Innovation Management theory, derived from the Toyota Production System, emphasises driving innovation by reducing waste, optimising resource use

and improving efficiency. By streamlining processes and reducing resource consumption, this theory enables companies to achieve green innovation while reducing environmental burdens.

An electronics manufacturer has optimised its supply chain processes through Lean Innovation Management, reducing material waste and energy consumption while improving the environmental performance of its products. In reducing resource waste and shortening development cycles, Lean management not only helped the company improve its economic performance, but also significantly enhanced its environmental performance.

Lean innovation management can be combined with an open innovation model that uses external resources to introduce green technologies, while optimising the internal application of these technologies through lean management to ensure efficient allocation and use of resources.

(5) Organizational Culture Theory

The theory of organisational culture was developed by Edgar Schein and states that corporate culture has a profound impact on innovation activities and organisational decisions [29]. Corporate culture can be a key enabler when promoting sustainable innovation. By establishing an organisational culture that supports green innovation, companies can motivate their employees to come up with innovative solutions related to environmental and social responsibility in their daily work.

Organisational culture theory can be effectively combined with the dual structure model to promote the simultaneous implementation of exploratory and developmental innovations through cultural support, ensuring that the goal of sustainable innovation is implemented within the organisation in the long term.

Through the above models, it is clear that firms should not rely on a single model when practising sustainable innovation management, but should use a combination of these models to maximise the benefits of green innovation. *The open innovation model* provides a way for firms to integrate external resources, enabling them to introduce green technologies through collaboration, and to achieve a balance

between short-term exploitative and long-term exploratory innovation through *the dual structure model. The Lean Innovation Management Theory* ensures the efficient application of green technologies by reducing waste and optimising processes. *Organisational culture theory*, on the other hand, provides cultural support to promote the formation of an internal innovation climate and ensures that employees actively participate and propose innovative solutions in the green innovation process.

Through the synergistic operation of these models, companies are able to simultaneously enhance economic efficiency, environmental efficiency and social responsibility, and achieve the goal of comprehensive sustainable development.

CHAPTER 2
ANALYSIS OF THE CURRENT STATE OF INNOVATION DEVELOPMENT

2.1. Trends in innovation development in China

2.1.1 Overview of China's innovation environment

In recent years, China's innovation development has made remarkable progress, driven by both policy guidance and market demand. The Chinese government has strongly supported science and technology innovation through a series of strategic policies to promote the development of enterprises in the areas of digital transformation and green innovation. The following section analyses China's current innovation environment in detail and explores the impact of policy support and market demand on firms' innovation activities.

(1) Policy support: national strategies to lead innovative development

The role of the Chinese Government in science, technology and innovation is crucial, especially in the current context of global technological competition and economic restructuring, and innovation-driven development has become one of China's core strategies for addressing global challenges. A number of national strategic policies, such as Made in China 2025 and the Fourteenth Five-Year Plan for Science, Technology and Innovation, place *technological innovation* at the centre of national development.

a. *Made in China 2025.* As a strategic policy to promote the upgrading of the manufacturing industry, Made in China 2025 aims to promote the development of high-end manufacturing, intelligent manufacturing and green manufacturing, especially in the areas of new-generation information technology, high-end equipment manufacturing and new materials, which have seen a significant increase in investment [20]. Data show that since the implementation of the policy in 2015, the output value of China's high-end manufacturing sector has grown at an average

annual rate of more than 8 per cent, with 5G equipment and semiconductor manufacturing being particularly prominent. The policy also promotes the transformation of traditional industries into intelligent and green ones through incentives and financing support, thus improving the competitiveness of the overall industry.

b. *"14th Five-Year Plan" Science and Technology Innovation Plan*. In the 14th Five-Year Plan, science and technology innovation is established as the core of the national strategy, and the need to independently master key core technologies, especially in the fields of artificial intelligence, quantum information and new energy, is explicitly mentioned [21]. The Chinese government plans to increase its investment in science, technology and innovation to more than 2.5 per cent of GDP by 2025 in order to promote basic research and technological breakthroughs. This policy orientation not only helps accelerate the development of cutting-edge technologies, but also reduces environmental burdens through green technological innovation and promotes sustainable development in China. For example, in the area of new energy vehicles, China's policy push has led to sales of 3.5 million electric vehicles by 2021, accounting for 50 per cent of the global market share.

c. *Green technology innovation and sustainable development policies.* In response to global climate change and resource scarcity, the Government of China has launched a series of policies to promote green technological innovation, such as the Energy Conservation and Environmental Protection Industry Development Plan. Such policies encourage enterprises to improve the efficiency of resource use, reduce pollutant emissions and promote sustainable development through innovation. Through technological upgrading, energy consumption in highly polluting industries such as iron and steel and chemicals has been reduced by more than 20 per cent [22]. In addition, in the area of carbon emission control and the circular economy, cleaner production technologies promoted by the Chinese government have led to significant reductions in carbon emissions in a number of industries, with some large

manufacturing companies reducing their carbon dioxide emissions by nearly 500,000 tonnes per year.

(2) Drivers of the market environment: technological change and demand escalation

In addition to strong policy impetus, another important driving force for innovation activities of Chinese enterprises comes from changes in market demand. Consumption upgrading, industry chain restructuring and support from the capital market have provided extensive market space and impetus for enterprises' innovation activities.

a. *Consumption Upgrade and Technology Demand***.** With China's rapid economic development, the rise of the middle class has led to an upgrading of the consumption structure. Consumer demand for green products and high-quality services is increasing, and companies are therefore investing more in green and digital technology innovations. According to McKinsey's 2020 market survey, more than 70 per cent of Chinese consumers say they are willing to pay a premium for green products [20]. This trend directly drives green technology innovation in production processes, material selection and supply chain management. Enterprises not only need to satisfy consumer demand for environmentally friendly products, but also need to improve the intelligence of their products through innovation to further enhance market competitiveness.

b. *Industry Chain Upgrading and Technology Co-operation.* With the restructuring of the global industrial chain, Chinese enterprises have actively introduced advanced technologies and carried out localised innovation through cooperation with leading international enterprises. For example, BYD has accelerated China's technological breakthroughs in the field of new energy vehicles by improving its battery R&D capabilities through cooperation with global battery technology leaders. This mode of cooperation not only shortens the cycle of technological innovation, but also promotes the enhancement of the enterprise's capability in the

field of green manufacturing, further optimising the innovation ecology of the domestic manufacturing industry.

c. *Capital market support.* The active participation of the capital market provides important financial support for enterprise innovation, especially in the fields of green technology and digital transformation.In 2021, the amount of venture capital investment in China's green technology sector increased by 45% year-on-year, reaching $50 billion [22]. The injection of capital provides financial protection for enterprise technology innovation, helping more enterprises to accelerate technology research and development and enhance the market competitiveness of their products. For example, through capital support, Meituan has developed an intelligent scheduling system using digital technology, effectively reducing resource waste and energy consumption. This kind of technological innovation not only improves the operational efficiency of enterprises, but also promotes the development of the overall economy in a greener and more sustainable direction.

2.1.2 Trends in industry innovation

China has made breakthroughs in a number of high-tech areas in recent years, particularly in the areas of the Internet, artificial intelligence and green energy, and these technological innovations are changing the way companies manage innovation.

(1) Internet innovation: driving the digital economy

China's Internet technology has become a core driver for the development of the digital economy. the widespread application of 5G technology and big data has improved the operational efficiency and data management capabilities of enterprises. According to Xue [5] et al. digital transformation plays a key role in promoting green technology innovation in enterprises. Enterprises are able to respond quickly to market demand and optimise supply chain management through data-driven innovative management models. For example, Alibaba has improved the accuracy of logistics and distribution and customer experience through big data analysis technology.

Impact. Internet innovation not only improves the operational efficiency of enterprises, but also prompts enterprises to pay more attention to the deep integration of technology and data in innovation management. Enterprises need to enhance data management systems to improve the speed of information acquisition and market adaptability, and optimise the decision-making process.

(2) Artificial Intelligence Innovation: Enhancing Automation and Intelligence

The application of AI in various industries in China has begun to profoundly change the management mode of enterprises, especially in the fields of manufacturing, healthcare and transport. According to Tang [4] et al, AI technology has helped companies improve productivity and optimise resource allocation through automation and intelligence. For example, the wide application of machine learning algorithms has produced significant results in quality control and supply chain management in the manufacturing industry.

AI technology is not only driving automated processes in production, but also helping companies manage technology innovation and product development more quickly through intelligent decision-making tools. This change in innovation management paradigm enables organisations to respond more flexibly to market changes and improve their innovation efficiency.

(3) Green energy innovation: fuelling sustainable development

Green energy is one of the key areas of innovation and development in China, and significant progress has been made especially in wind, solar and electric vehicle technologies. According to Rennings [19] and others, eco-innovation not only reduces environmental pollution, but also improves the competitiveness of enterprises in the market. China has strongly promoted the development of enterprises in the field of green energy through policy support and technological innovation. For example, LONGi has significantly improved the photovoltaic conversion efficiency of solar cells through technological innovation.

Implications. Innovations in green energy technologies have prompted companies to make sustainability a central element in innovation management. According to Fussler & James [16], green innovation requires more efficient resource management to improve the sustainable competitiveness of firms.

2.2. Technical and economic characteristics of the company Mei Tuan

2.2.1 Company Profile of Meituan

In 2015, Meituan merged with Dianping to become Meituan Dianping, and was successfully listed on the Hong Kong Stock Exchange in 2018, with its name simplified to "Meituan" in 2020. With a differentiated competitive strategy, Meituan has risen to success in the "Battle of a Thousand Tours" and has continued to expand its business scope. Today, Meituan's services cover a wide range of areas, including movie ticket booking, hotel booking, catering and takeaway, shared mobility, and fresh food retailing, making it China's leading local life service platform.

Currently, Meituan's business is divided into three main segments: food and beverage takeaways, in-store, hotels and travel, and new businesses. In the catering takeaway segment, Meituan holds a leading position in China with a 60%-70% market share, and its revenue sources mainly include commissions on takeaway orders and merchant advertising fees. In the in-store business, Meituan has become a major marketing platform for the catering, leisure and entertainment, beauty and wedding industries by distributing group-buying coupons and providing consumer evaluation information online. In the hotel and travel business, Meituan, despite its late start, has gradually increased its market share by ploughing into the lower-tier city market, competing with platforms such as Ctrip and Tongcheng Yilong.

In terms of new businesses, Meituan's strategic focus is on retail, and it is actively exploring emerging areas such as shared mobility, ToB services and financial services. Through services such as "Meituan Grocery", "Meituan Flash Sale" and "Meituan Preferred", Meituan has laid out the retail market in a

comprehensive manner and used digital technology to build a comprehensive Internet platform that connects merchants and consumers and drives large-scale transaction matching. By the fourth quarter of 2021, Meituan's annual transactional users had reached 691 million, the number of active merchants had reached 8.8 million, and the average daily order volume of takeaways had reached 42.5 million units, further consolidating its leading position in China's Internet lifestyle services industry.

2.2.2 Technological innovation of Meituan

In recent years, Meituan's technological innovation has demonstrated its strong innovative capacity through a series of inputs and management measures, especially in the combination of digital technology and green technology. By continuously increasing R&D investment, paying attention to human resource construction, building a research platform and optimising the management of innovation activities, Meituan has been able to achieve remarkable results in the field of technological innovation. This paper will analyse the three aspects of innovation investment, innovation activity management and innovation output.

(1) Innovative inputs

a. financial commitment

R&D investment is a key indicator of how well a company is financially supported in the innovation process. Meituan's annual report shows that the R&D expenditure of the enterprise is divided into two parts: expensing and capitalisation. In practice, R&D costs are directly charged to current expenses when incurred, and development costs are capitalised as intangible assets only when specific conditions are met. However, Meituan has not recorded any capitalised development costs in its financial statements to date. As a result, R&D costs have become the main basis for measuring Meituan's investment in innovation.

Referring to the study of Liu Yunguo and Liu Wen [23], the intensity of R&D investment of enterprises can be assessed by the proportion of R&D expenses to total assets. From Figure 2.1, it can be seen that Meituan's R&D expenses show a trend of increasing year by year. In particular, since the implementation of the dual equity

structure of Meituan in 2018, R&D investment has increased significantly. By 2021, R&D expenses have increased by a cumulative total of 9.6 billion yuan, an increase of 136%.

In addition, the proportion of R&D expenses to total assets declined in 2017, but has continued to rise since the implementation of the dual shareholding structure in 2018 and exceeded the average level of relatively comparable companies after 2019. This shows that the implementation of the dual shareholding structure has effectively boosted Meituan's financial investment in R&D and enhanced its innovation capability.

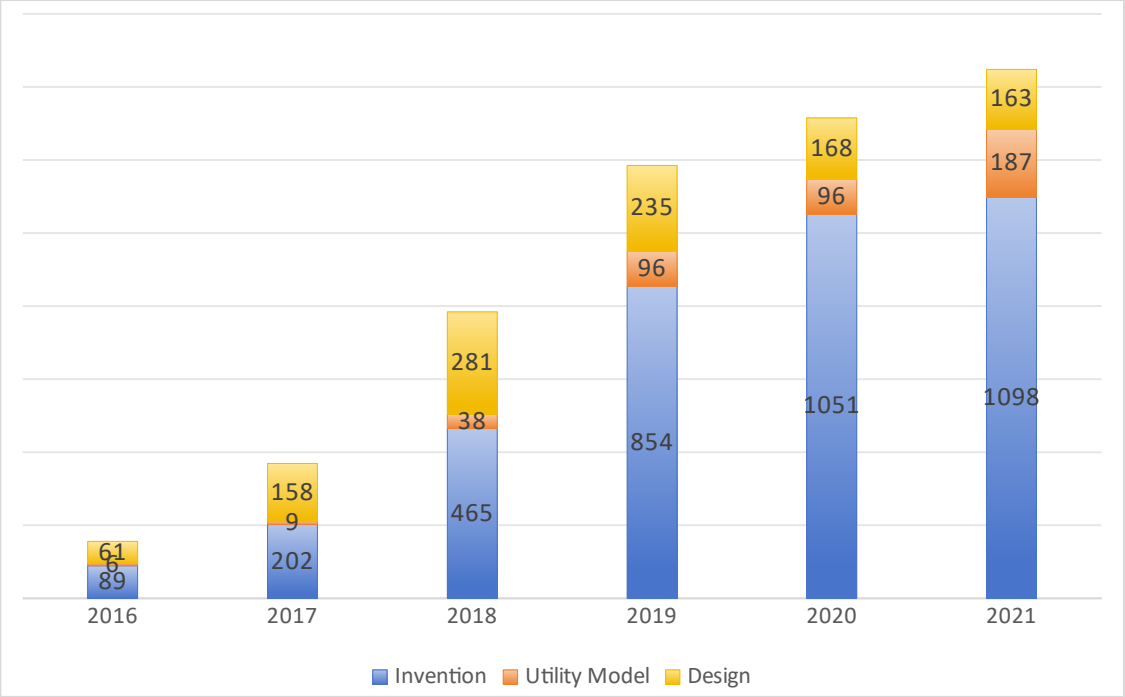

Figure 2.1 R&D Expenses of Meituan and Relatively Comparable Companies
Data source: Based on Meituan's annual report and Flush calculations

b. Manpower inputs

According to Meituan's annual report, the increase in R&D expenses mainly stems from the growth in the number of R&D staff and the enhancement of benefits, indicating that Meituan attaches great importance to the role of human capital.In April 2018, Meituan's total number of employees was 46,662, of which 10,343 were

R&D staff, and by 2021, the total number of employees will reach 10,033 employees. The specific composition is shown in Figure 2.2.

In recent years, Meituan has been focusing on the expansion and optimisation of its technology team, especially investing a lot of manpower in the fields of Big Data and Artificial Intelligence, which has significantly improved the company's innovation capability. The technical team of Meituan has grown from five people in 2010 to more than 10,000 people today, covering a wide range of technical fields such as front-end, system, algorithm, big data and so on. It has gradually established an industry-leading technology system.

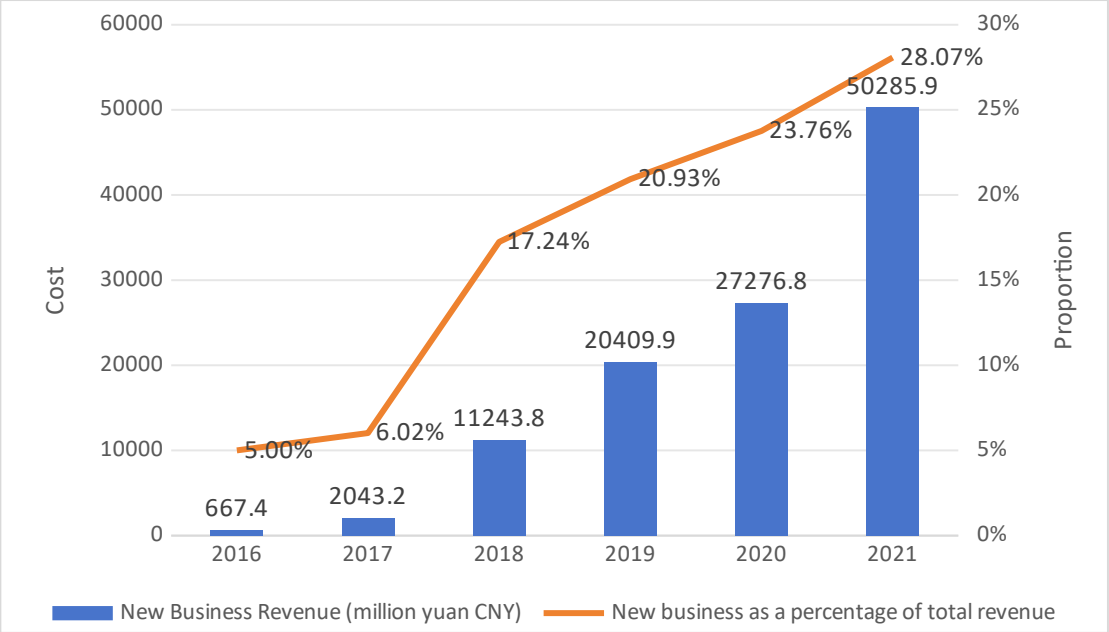

Figure 2.2 Employee Composition of Meituan as of April 2018

Source: Calculated from Meituan's prospectus.

On the other hand, Meituan continuously strengthens various kinds of training and education to improve the professional quality and innovation ability of its employees. In 2016, Meituan set up the talent training platform "Internet + University", aiming to enable employees to obtain systematic training opportunities when they first enter the company, improve their professional, communication and leadership skills through learning on the platform, so as to enable them to grow

rapidly, and through various forms of theme sharing to help employees broaden their horizons and enhance their innovation ability.

c. scientific research and innovation

In 2019, Meituan set up the Meituan Research Institute, relying on the technology, data and industry experience accumulated over the years, to build a scientific research platform focusing on research in the fields of economic and social development. Through this platform, Meituan has not only carried out external cooperation, but also released relevant social, economic and policy research results, which has helped the company better grasp the direction of innovation and promoted sustained innovation and development.

From the perspective of Meituan's overall performance, both R&D funds, human resources, and the construction of research platforms have shown steady growth since the implementation of research and innovation. The continuous investment in scientific research platforms has enhanced Meituan's comprehensive ability in technological innovation and further strengthened the company's competitiveness in the industry.

(2) Innovative event management

The long cycle, high technological requirements and high degree of uncertainty of innovation activities make the enterprise's innovation management capability a key factor in determining the success or failure of innovation. Effective management of innovation activities not only includes the formulation of relevant systems, but also requires enterprises to have the ability to flexibly respond to obstacles and rationally allocate resources in the innovation process. Enterprises must be able to adjust their organisational structure, flexibly allocate personnel and coordinate external resources in accordance with changes in the environment, so as to ensure the smooth implementation of innovation activities.

A sound incentive mechanism can greatly enhance the enthusiasm of employees, prompting them to take the initiative to devote themselves to innovation work, and at the same time improve the efficiency of internal communication, thus

promoting the improvement of innovation management level. Meituan has adopted diversified incentive policies according to the needs of talents at different stages of development. The company ensures the attraction and retention of outstanding talents by offering competitive salaries, performance-based cash incentives and equity incentive plans.

In 2021, Meituan updated its incentive approach. The latest incentive system adopts a "flat grade, broadband pay" model, which provides employees with more opportunities for pay adjustments and incentive windows. As shown in Table 2.1, this model ensures that employees receive positive pay feedback within a short period of time, which motivates them to be more actively engaged in innovative work.

Table 2.1

Meituan's "Four Ones" Incentive Model

Name	Incentives
One annual cash adjustment and stock grants	Differentiated annual cash increases and annual share grants based on comprehensive judgement of employees to ensure competitive remuneration while reflecting differentiation and long-term rewards
One promotion and salary increment	Salary adjustments for employees who have been promoted reflect increased competence and expanded responsibilities across grades.
One special autumn salary transfer	Small cash salary adjustments are granted by managers to employees who are particularly outstanding (e.g. making particularly important contributions, growing particularly fast, etc.), emphasising the differentiation and flexibility of pay incentives.

In addition, Meituan also fosters its employees' awareness of innovation and promotes more patent applications and technological innovations through intellectual property training and patent awards.

2.3 Integrated assessment of the company's Mei Tuan innovation potential

Meituan, China's leading lifestyle services platform, has taken a key position in the digital economy with high R&D investment and technological innovation. 2023 financial results show that Meituan's R&D investment reached RMB 21.2 billion, accounting for more than 8 per cent of its revenue, laying a solid foundation for technological innovation. In addition, a Xinhua report noted that in the first quarter of 2023, Meituan achieved significant growth in operating profit amid the recovery of the consumer market and continued to increase its investment in technology R&D, with R&D spending of up to RMB 500 million.

In order to systematically assess the innovation potential of MMT, this section looks at the following three areas:

(1) Innovation capability: examines Meituan's performance in technology, product and service innovation, including its application of technologies such as artificial intelligence and big data, and their market impact.

(2) Resource integration capability: analyse Meituan's integration strategy in internal resource optimisation and external strategic investment, such as enhancing service intelligence through investment in AI companies.

(3) Market Adaptability: To assess the responsiveness and adaptability of Meituan to changes in market demand through market share and user feedback.

2.3.1 Analysis of innovation capacity

Meituan's strengths in innovation capability are mainly in technological innovation, product innovation and service innovation. These innovations have not only helped Meituan gain a competitive advantage in the local life service market, but also enhanced its ability to respond to market changes.

(1) technological innovation

Meituan's technological innovation focuses on artificial intelligence, big data and supply chain optimisation, driving the intelligence and efficiency of its services. Below are Meituan's core inputs and achievements in the field of technological innovation:

Table 2.2

Technological innovation areas

Technological innovation areas	Specific measures
artificial intelligence (AI)	Meituan applies deep learning technology in intelligent order dispatching and intelligent recommendation to improve user experience and delivery efficiency.
big data analytics	Through user behaviour analysis and data-driven optimisation, Meituan achieves accurate demand forecasting and business decision support, enhancing customer satisfaction.
Supply Chain Optimisation	Using data analytics and supply chain management, Meituan has optimised delivery routes and times, dramatically improving logistics efficiency and reducing costs.

This series of technological innovations not only enhances Meituan's competitiveness in the market, but also further satisfies customers' demand for efficient and precise services.

(2) product innovation

Meituan's product innovation is based on its diversified business platforms, including takeaway, in-store services and travel. In order to meet multi-level demand, Meituan has integrated diverse services into its platform through a "horizontal expansion" strategy, such as hotel booking and in-store services. This rapid iteration based on market feedback enhances user stickiness and platform attractiveness. Specific innovations are as follows:

Table 2.3

Product Innovation Direction

Product Innovation Direction	**Specific measures**
Takeaway business	Meituan has introduced a personalised recommendation system on its takeaway platform and optimised the user interface to improve the overall user experience.
Hotel Reservations & Travel Services	Through partnerships with hotels and travel service providers, Meituan has integrated diverse travel booking features on its platform, expanding service options for users.
In-store and in-home services	Launched a series of innovative features, such as appointment queuing and in-store offer recommendation, which enhanced user experience and increased user stickiness in the in-store business.

(3) Service Innovation

Meituan's focus in service innovation is on optimising customer service systems and linking online and offline. The study notes that relational embedding

helps build trusting relationships and reduce information asymmetry, leading to more effective integration of resources in collaborative innovation. For example, Meituan's 24-hour online service and no-touch delivery received favourable market feedback during the epidemic, further enhancing its user stickiness and brand loyalty. Specific innovations are described below:

Table 2.4

Service Innovation Direction

Service Innovation Direction	**Specific measures**
Customer service system optimisation	Meituan has introduced intelligent customer service and 24-hour online service in its customer service system, which improves the convenience and responsiveness of users in problem solving.
Online and offline linkage	For example, during the epidemic, Meituan quickly launched its no-touch delivery service, which met users' needs for safety and convenience and improved the company's market resilience.

2.3.2 Resource Integration and Market Adaptability Analysis

Meituan's resource integration and market adaptability can be analysed from the following two perspectives: firstly, its resource integration strategy driven by technology and data, and secondly, its efficient market response mechanism.

(1) Technology-driven resource integration

Meituan takes technology as the core of resource integration, and improves the efficiency and quality of resource integration through the extensive application of AI and big data in each business line.Shi& Xiao [29] point out that technology-driven resource integration helps firms to acquire and absorb multiple innovative resources in the innovation network, thus forming a dynamic competitive advantage. Meituan has built an efficient data processing and analysis system internally, enabling it to adjust resource allocation in real time, for example, dynamically deploying takeaway rider resources during peak hours to ensure the timeliness of delivery and service experience.

In addition, Meituan's "food + platform" model has promoted the horizontal expansion of its business, extending from takeaway to diversified areas such as hotels and tourism [30]. Through business integration, Meituan has further optimised its supply chain and customer data management, enabling various businesses to share platform resources and achieve effective cost control.

(2) Strategic co-operation and market adaptation

Meituan has adopted an active co-operation strategy in external resource integration in order to expand its resource reserves in technological innovation and market expansion. For example, Meituan acquires emerging technologies, data resources, and market information through strategic investments and partnerships, which not only enhance its technological capabilities, but also its market response speed [30]. This cooperation model allows Meituan to quickly adapt to policy changes and changes in consumer demand, thus maintaining competitiveness in different market environments.

2.3.3 SWOT analysis and comprehensive assessment

SWOT analysis is a common strategic tool used to comprehensively assess the internal and external competitive environment of an organisation. By analysing internal Strengths and Weaknesses and external Opportunities and Threats, SWOT helps a company to systematically understand its current situation and potential room for growth. Internal factors focus on the strengths and weaknesses of a company's

resources and capabilities, while external factors focus on market opportunities and possible challenges. Through this approach, companies are able to formulate the corresponding SO (Strengths-Opportunities), ST (Strengths-Threats), WO (Weaknesses-Opportunities) and WT (Weaknesses-Threats) strategies to ensure that innovation and growth strategies are in line with market needs.

When analysing the SWOT elements of Meituan, the first focus is on its internal strengths in order to identify the key factors that support its market position. At the same time, identifying external opportunities and threats will help to formulate a more targeted strategy to achieve optimal allocation of resources. The strengths, weaknesses, opportunities and threats of Meituan in each aspect will be analysed in detail below.

(1) cutting edge

a. Digitalisation and Diversified Business Portfolio. Meituan's diversified portfolio of services, including takeout, hotels, and in-store services, has enabled it to generate a stable revenue stream across multiple verticals. According to Meituan's 2023 earnings data, the revenue of its core local commerce division grew by 28.7% year-on-year, and profit growth reached 31.2%, demonstrating Meituan's efficiency in business integration and user services [30]. Especially in the emerging instant retail and high-frequency user conversion, Meituan significantly enhanced user stickiness by optimising data-driven recommendations and refined operations.

b. Application of Green Innovative Technology. Meituan's application of green technologies for contactless delivery and environmentally friendly packaging has helped to improve its brand image in terms of sustainability. According to financial report data, Meituan's technological applications in logistics and supply chain optimisation have improved resource utilisation, resulting in lower distribution and fulfilment costs, which plays an important role in improving overall efficiency [29].

c. Patent output. Meituan's technological innovation is mainly focused on its wholly-owned subsidiary, Beijing Sanfu Online Technology Co. The number of

patent applications is an important indicator of a company's technological innovation output. As can be seen in Figure 2.3, the total number of patents filed by Meituan has been on an upward trend.The number of invention patent applications increased significantly after Meituan implemented its dual equity structure in 2018, by 130.2% year-on-year, and continued to grow in 2019, with the number of invention patents increasing by a total of 389, and the total number of patents increasing by 136% in three years. By 2021, the number of patents filed by Meituan exceeds 1,000 per year, continuing to lead relative comparable companies. As can be seen from Figure 2.4, before Meituan's implementation of dual-equity technological innovation in 2018, the number of its invention patent applications was smaller than the average of relatively comparable companies, while after 2018, the number of Meituan's patent applications began to exceed the average of relatively comparable companies and continued to rise. This indicates that Meituan's innovation investment has been well translated and the results of its technological innovations have maintained steady growth

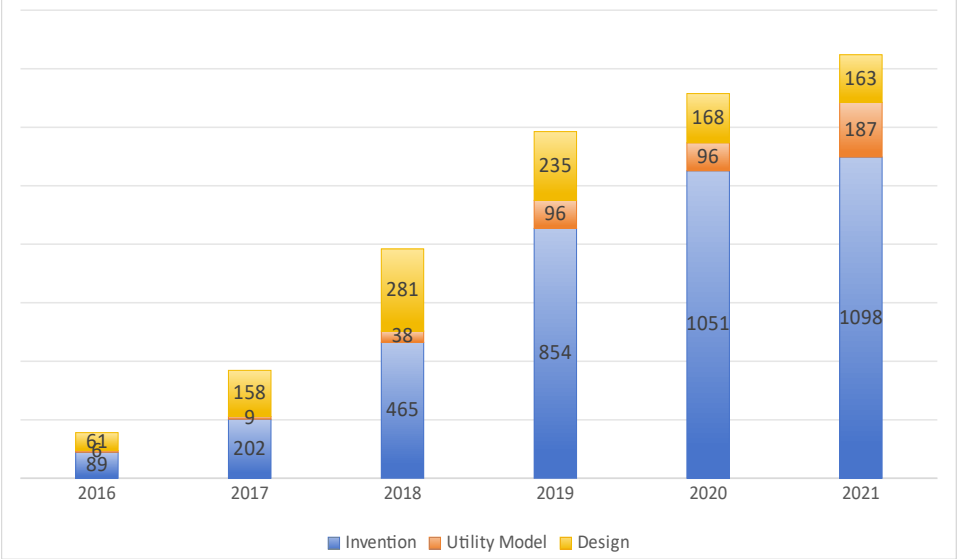

Figure 2.3 Number of Patent Filings by Meituan, 2016-2021

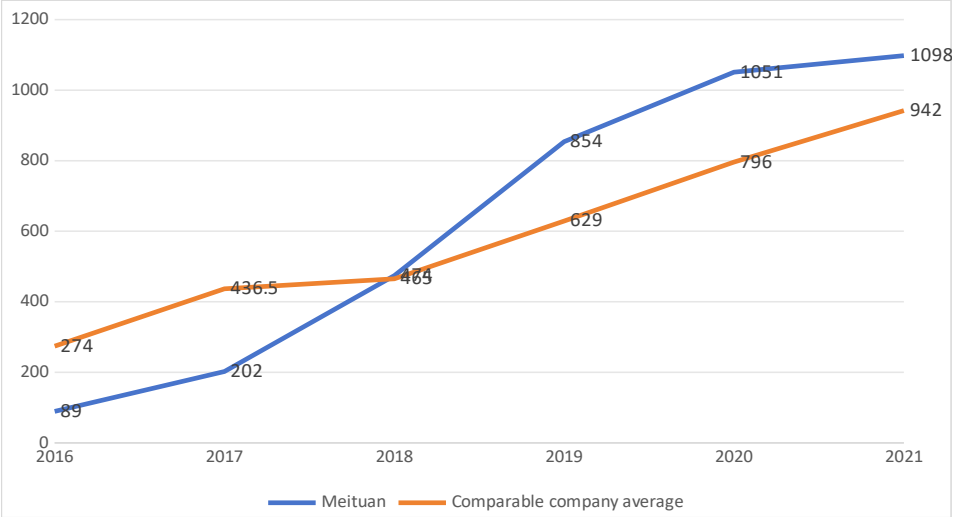

Figure 2.4 Patent Filings by Meituan and Relatively Comparable Companies, 2016-2021

Source of data: compiled from PatentNet search

d. New Business. By continuously innovating its business model, Meituan has successfully expanded a number of new business areas against the backdrop of a slowdown in the growth rate of its traditional business.Meituan Flash Sale, launched in 2018, relies on the original delivery system to realise instant delivery of a wide range of non-food and beverage commodities, which has boosted the expansion of its retail business.Meituan Buy Food, launched in 2019, mainly serves high tier cities to provide efficient fresh food delivery services to users. Meituan Grocery, launched in 2019, mainly serves high-tier cities and provides users with efficient fresh food delivery services, while Meituan Preferred, launched in 2020, adopts the "pre-order + self-pick-up" model, further promoting the integration of online and offline fresh food retailing.

These new businesses have generated significant revenue growth for Meituan. Since the beginning of 2018, Meituan's new business revenues have continued to grow rapidly, with new business revenues accounting for more than 25% of total operating revenues in 2021. This diversified and innovative business has not only enhanced Meituan's overall revenue capacity, but also brought synergies to its traditional business, further consolidating Meituan's competitiveness in the market.

Through technological innovation and new business expansion, Meituan's innovation output continues to grow, bringing sustained growth momentum and wider market opportunities to the organisation.

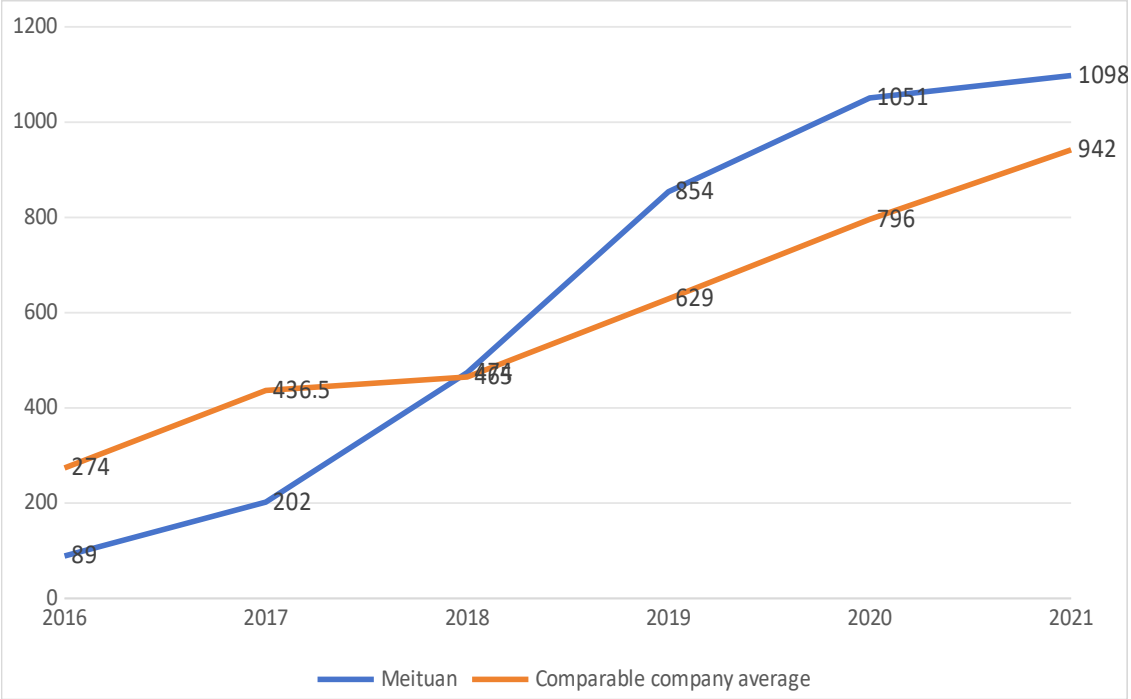

Figure 2.5 Meituan's new business revenue, 2016-2021

Source: Calculations based on Meituan's annual report

(2) inferior

a. Financial pressure from high R&D investment. While high R&D expenditure has enabled Meituan to maintain its leading position in technological innovation, it has also put some pressure on its financial structure. Meituan's annual report indicates that R&D expenditure will account for more than 8% of its total revenue in 2023, which may affect its profitability in times of economic volatility and increased competitive pressure.

b. Business Complexity and Resource Integration Challenges. Meituan's wide range of businesses across a number of different industries (e.g., takeout, travel, community e-commerce, etc.) increases the complexity of management and resource integration. Different business lines may have difficulties in resource sharing and

synergistic efficiency, especially in the context of parallel expansion of multiple businesses, which puts higher demands on the management team.

(3) chances

c. Policy support and green economy development. With the Chinese government's growing policy support for the green economy and digital transformation, Meituan can leverage its accumulation of green technologies to further expand its market, especially into regions that are more focused on sustainable development. This trend provides a broad market opportunity for Meituan's green innovations.

d. Opportunities for Instant Retail and Community Services Expansion. Meituan's emerging instant retail service has demonstrated steady growth potential, with its annual revenue increasing by 18.0%. This emerging business is expected to expand further in the future driven by demand for market services.

(4) menace

a. Competition in the industry has intensified. With the continuous cross-border entry of internet platforms into the local living services market, such as the addition of platforms such as Jitterbug, Meituan is facing fierce competition from various parties. The advantages of emerging platforms in content innovation and technology application may pose a threat to Meituan's market share.

b. Environmental regulations are getting stricter. As environmental regulations tighten, Mission may face higher compliance costs. If environmental standards increase further in the future, Meituan will need to increase its investment in green technology, which poses a challenge to its financial structure.

On balance, Meituan has a significant advantage in enhancing competitiveness and adapting to market changes through the combination of digital technology and green innovation. However, the financial pressure brought by high R&D investment and the increasingly fierce market competition still need to be taken seriously. In the future, Meituan should strengthen resource integration and cross-business synergies

to better respond to policy and market changes, and to drive the enterprise to achieve long-term steady growth under a sustainable development framework.

CHAPTER 3
PROSPECTS FOR THE DEVELOPMENT OF INNOVATIVE ACTIVITIES OF COMPANIES IN THE FRAMEWORK OF SUSTAINABLE DEVELOPMENT

3.1. Strategic directions for innovative development in the context of sustainable development

In the context of sustainable development, enterprises are compelled to adopt innovation and development strategies that effectively address the dual demands of market dynamics and societal expectations. Such strategies must strike a balance between long-term competitiveness and corporate social responsibility. The integration of sustainability principles into innovation management is no longer optional but a critical component of a company's ability to thrive in an increasingly interconnected and environmentally conscious world. Meituan's innovative development strategy serves as a prime example of how companies can achieve this balance by prioritizing sustainable growth, organizational efficiency, and environmental responsibility.

Sustainable growth necessitates the formulation of clear strategic objectives while maintaining flexibility to adapt to the dynamic nature of market demands. Meituan has exemplified this approach by focusing on long-term technological leadership and market expansion. Through continuous innovation and strategic foresight, the company has established itself as a leader in the local commerce sector. For instance, Meituan's core local commerce division achieved remarkable results in 2023, with a year-on-year revenue growth of 28.7% and profit growth of 31.2%. These achievements underscore the company's ability to integrate technological advancements and market insights into its strategic planning processes. By remaining adaptable and forward-looking, Meituan ensures its resilience and relevance in an ever-evolving business environment.

High-performing organizations and cohesive teams are the cornerstone of sustained innovation and efficiency. Meituan has cultivated an organizational structure that prioritizes collaboration, agility, and professional development. Since its inception, the company has embraced a flat organizational hierarchy, fostering cross-departmental cooperation and minimizing bureaucratic bottlenecks. This approach not only accelerates decision-making processes but also encourages a culture of transparency and inclusivity.

To support its workforce, Meituan provides systematic training programs and career development opportunities, ensuring employees are well-equipped to contribute to the company’s innovative endeavors. Clear promotion channels and attractive incentive mechanisms have proven instrumental in retaining top talent. By creating an environment that values employee engagement and continuous learning, Meituan has solidified its position as a hub for creativity and sustainable innovation. The company’s emphasis on talent management has also enhanced its ability to respond to emerging challenges and seize new opportunities.

In today’s fast-paced market, the ability to innovate is critical for maintaining a competitive edge. Meituan has demonstrated its commitment to continuous innovation by integrating cutting-edge technologies into its business processes. The deployment of smart ordering systems and unmanned delivery solutions has significantly enhanced operational efficiency and customer satisfaction. These advancements reflect Meituan's proactive approach to leveraging technology for competitive advantage.

By closely monitoring market trends and consumer behavior, the company has been able to anticipate changes and tailor its offerings accordingly. This adaptability has not only bolstered Meituan’s market responsiveness but also ensured the company remains a preferred choice for consumers. In a rapidly changing landscape, Meituan's dedication to innovation serves as a model for businesses aiming to achieve sustainable growth through technological excellence.

A robust financial management system is a fundamental requirement for sustainable enterprise development. Meituan has prioritized the establishment of comprehensive budget control mechanisms and cost management systems to ensure optimal resource utilization. Through strategic financial planning, the company has maintained a strong foundation for its innovative projects, even during periods of rapid expansion.

Effective risk management practices have further enhanced Meituan's financial stability. By proactively identifying and mitigating potential risks, the company has strengthened its resilience against market uncertainties. The optimization of Meituan's financial structure has not only secured funding for future innovations but also reinforced investor confidence. This sound financial framework underscores the company's ability to sustain its innovative efforts while maintaining fiscal responsibility.

Under the framework of sustainable development, corporate innovation must transcend economic objectives to encompass environmental and social considerations. Meituan has embraced this holistic approach through its Green Mountain Plan, which aims to minimize the environmental impact of its operations. The initiative includes measures such as promoting green packaging and adopting low-carbon logistics solutions. By 2023, Meituan had introduced 41 green packaging products, recycled 17,600 tonnes of plastic takeaway boxes, and saved 226,000 tonnes of carbon emissions. These achievements reflect the company's unwavering commitment to environmental stewardship.

In addition to its environmental initiatives, Meituan has actively promoted social responsibility by raising awareness among users and stakeholders. The company's efforts to align its business practices with sustainability goals have not only enhanced its brand image but also contributed to broader societal benefits. Through its green innovation practices, Meituan has set a benchmark for integrating corporate responsibility into business strategies.

In summary, Meituan’s innovative development strategy exemplifies the integration of technological advancement, environmental governance, and social responsibility within the framework of sustainable development. By adopting a comprehensive and adaptable approach, the company has demonstrated that sustainable innovation is not only feasible but also profitable. Meituan’s model serves as a valuable reference for enterprises seeking to navigate the complexities of modern markets while adhering to sustainability principles. This strategy not only secures Meituan’s long-term competitiveness but also establishes the company as a pioneer in the pursuit of sustainable business practices.

3.2 Implementation of digital and green technologies in innovation management

3.2.1 Green technology innovation

Green technology innovation, which is also often referred to as "environmental innovation" or "eco-innovation" in existing research [24], is an important means for Meituan to achieve its sustainable development goals. By applying green technologies in takeout and logistics, Meituan has successfully reduced carbon emissions and plastic use. Data shows that in 2023, the number of users of Meituan's "no cutlery required" function has reached 4 million, saving 226,000 tonnes of carbon emissions in a year, bringing double value to society and the environment.

3.2.2 Impact of enterprise digital transformation on green technology innovation

Enterprise digital transformation refers to the process of enterprises using artificial intelligence, blockchain, cloud computing and big data and other digital technologies to improve production and business management and other aspects of the activities and the deep integration of the enterprise to bring about a comprehensive change in the enterprise [25].

Digital transformation brings new resources and capabilities to green technology innovation, which not only expands the boundaries of resource allocation, but also reduces the uncertainty in the innovation process and enhances the green innovation capability of enterprises. For example, the digital platform can broaden the financing channels of enterprises and provide financial support for green technological innovation [26]; digital technology also helps enterprises to reduce information asymmetry while allocating innovation resources more efficiently and reducing the risk of green technological innovation [27]; in addition, the implementation of enterprise digital transformation can change the paradigm of green technological innovation, cultivate diversified innovation subjects [28-29], and enable the their deep participation in the process of enterprise green technology innovation, further expanding the boundaries of green technology innovation, and providing power to enhance the number of green technology innovation.

In summary, digital transformation provides systematic support for green technology innovation from resource acquisition, decision support to intelligent production, and provides a new path for enterprises to achieve environmental protection and sustainable development.

In this context, Meituan, as a leading life service platform in China, has constructed a typical case of innovation management through the combination of digitalisation and green technology. The following analyses how Meituan uses digital technology to promote green technology innovation:

(1) *Digital Platform and Green Technology Application.* Meituan has built a comprehensive digital platform that analyses consumers' dietary preferences and nutritional needs through data to achieve personalised catering recommendations and reduce food waste. In addition, Meituan has introduced drone delivery to achieve efficient delivery of "three kilometres and 15 minutes", which improves green logistics efficiency and reduces carbon emissions.

(2) *The "Green Mountain Plan" promotes the green development of the takeaway industry.* Meituan's "Green Mountain Plan" is dedicated to the low-carbon

and environmentally friendly development of the takeaway industry, with specific measures including reducing the use of disposable packaging and exploring ways to combat plastic pollution. In collaboration with Tsinghua University's School of Environmental Studies, Midea systematically evaluates the environmental impact of the entire takeaway process based on the whole life cycle theory, providing theoretical and practical support for the sustainable development of takeaway packaging.

(3) *Intelligent logistics network and unmanned delivery technology.* By establishing a minute delivery network, Meituan covers more than 2,800 cities nationwide, covering catering, fresh food and other categories. The digital empowerment of the distribution network and unmanned delivery technology have effectively improved efficiency and reduced labour costs and carbon emissions. For example, drone delivery has landed in many cities, shortening the average delivery time to 12 minutes, 150 per cent more efficient than the traditional mode, and significantly reducing carbon emissions.

(4) *Emergency Response and Livelihood Protection.* During the epidemic, Meituan's intelligent logistics network achieved efficient distribution of materials through AI and big data technology to safeguard the supply of residents' necessities. Its distribution system optimises routes in real time, which not only improves efficiency but also reduces carbon emissions, realising the unity of social responsibility and environmental benefits.

In summary, Meituan has successfully combined green and user needs in depth in the process of digital transformation, which not only improves service efficiency, but also promotes the green development of the takeaway and logistics industry, and achieves a win-win situation in terms of economic and environmental benefits.

3.3 Enhancing collaboration and partnerships for sustainable innovation

Collaboration and partnerships are indispensable drivers of sustainable innovation, particularly in addressing complex challenges such as green logistics and environmentally friendly technologies. For Meituan (MMT), a collaborative strategy not only enhances operational efficiency but also reinforces its commitment to sustainability and corporate responsibility. These partnerships extend across academia, industry, government, and consumer communities, collectively forming a comprehensive ecosystem for sustainable innovation. Meituan's approach exemplifies how multi-stakeholder engagement can lead to meaningful environmental and social progress while maintaining a competitive edge.

(1) Scientific Cooperation

Scientific research and collaboration with academic institutions form the foundation of Meituan's green innovation initiatives. Meituan works closely with leading research institutions such as Tsinghua University to evaluate the environmental impact of takeaway packaging and develop actionable insights for green technology innovation. This partnership has provided Meituan with theoretical support for implementing environmentally friendly packaging solutions and identifying areas for further improvement.

Such collaborations enable Meituan to leverage cutting-edge research in material sciences, environmental studies, and lifecycle analysis. For instance, research partnerships have helped the company design packaging that minimizes material use while maximizing recyclability, significantly reducing its ecological footprint. Moreover, these collaborations contribute to building a knowledge-sharing platform that benefits both academia and industry, fostering a culture of sustainability-focused innovation.

(2) Supply Chain Collaboration to Optimize Green Logistics

Supply chain efficiency is a critical component of Meituan's sustainability strategy. By partnering with logistics and technology companies, Meituan has

developed an advanced digital logistics network that integrates unmanned delivery technology. This collaboration has resulted in substantial improvements in operational efficiency and reductions in carbon emissions.

For example, the use of drones and automated delivery vehicles has streamlined last-mile logistics, minimizing energy consumption and delivery times. Additionally, predictive analytics powered by AI technologies allows Meituan to optimize route planning, further reducing fuel usage and greenhouse gas emissions. These initiatives not only align with global trends in green innovation but also enhance the resilience and adaptability of Meituan's supply chain. As the logistics industry evolves, Meituan's partnerships ensure it remains at the forefront of sustainable practices.

(3) Policy and Industry Alliance Support

Navigating the complexities of environmental regulations and industry standards requires strong alliances with government entities and industry groups. Meituan actively collaborates with policymakers and industry alliances to secure policy support and reduce compliance costs. These partnerships are particularly critical as environmental standards become increasingly stringent worldwide.

Collaborative research with government bodies has enabled Meituan to anticipate regulatory changes and adapt its strategies proactively. For instance, Meituan's compliance with evolving packaging and emissions standards has been facilitated by its close ties with regulatory agencies. Furthermore, these alliances contribute to broader industry transitions toward sustainability by establishing benchmarks and best practices. By aligning its objectives with national and international sustainability goals, Meituan strengthens its competitive position while supporting systemic change in its industry.

(4) User Collaboration with Environmental Organizations

Engaging consumers is a pivotal aspect of Meituan's collaborative approach. By partnering with environmental organizations, Meituan has successfully promoted initiatives such as the "no cutlery required" feature, which encourages users to reduce

their reliance on disposable items. This program not only mitigates plastic pollution but also raises consumer awareness about the environmental impact of their choices.

The partnership has had measurable outcomes, including a significant reduction in the use of single-use plastic items. Furthermore, these collaborations reinforce Meituan's brand image as an environmentally responsible company, fostering greater loyalty among eco-conscious consumers. Meituan's ability to integrate user behavior into its sustainability efforts highlights the importance of consumer participation in achieving broader environmental goals.

Comprehensive Ecosystem for Sustainable Innovation

Meituan's collaborative efforts have culminated in the creation of an all-encompassing ecosystem for sustainable innovation. By combining scientific research, supply chain integration, policy advocacy, and user engagement, the company has established a holistic approach to green transformation. This multi-party cooperation model not only drives Meituan's internal sustainability initiatives but also sets an innovative precedent for the broader industry.

The ecosystem is characterized by dynamic interactions among stakeholders, each contributing unique expertise and resources. Academic institutions provide the theoretical underpinnings for innovation, logistics partners ensure efficient implementation, policymakers create an enabling regulatory environment, and consumers act as active participants in promoting green practices. This synergistic approach amplifies the impact of individual efforts, resulting in a collective advancement toward sustainability.

Meituan's collaboration and partnership strategy exemplify the transformative potential of multi-stakeholder engagement in driving sustainable innovation. By leveraging the strengths of diverse partners, the company has not only enhanced its operational capabilities but also contributed to addressing pressing environmental challenges. These partnerships, encompassing academic institutions, logistics providers, policymakers, and environmental organizations, demonstrate how coordinated efforts can achieve goals that no single entity could accomplish

independently. Meituan's ability to integrate advanced research, technological innovation, and consumer engagement into its sustainability initiatives sets it apart as a leader in corporate responsibility and environmental stewardship.

The success of Meituan's approach underscores the importance of building ecosystems that prioritize sustainability while fostering innovation and resilience. Through these partnerships, Meituan has managed to align its business objectives with global environmental priorities, effectively addressing issues such as carbon emissions, resource efficiency, and waste reduction. The multi-faceted ecosystem not only accelerates the company's green transformation but also encourages stakeholders across the industry to adopt similar practices. Furthermore, Meituan's strategy highlights the necessity of continuous collaboration, where evolving challenges are met with adaptive and inclusive solutions.

This model serves as a blueprint for other organizations aiming to integrate collaboration into their sustainability strategies, offering a pathway to meaningful and lasting impact. By sharing knowledge, pooling resources, and engaging various stakeholders, companies can create robust frameworks for addressing environmental and social challenges. Meituan's initiatives reflect a forward-thinking approach, emphasizing the need for long-term partnerships and community involvement in achieving sustainable growth. As businesses increasingly face pressure to act responsibly, Meituan's example illustrates how collaboration can transform sustainability from a challenge into an opportunity for innovation, growth, and leadership. This comprehensive and inclusive model has the potential to inspire widespread adoption, contributing significantly to global efforts to create a sustainable future.

CONCLUSIONS

This study provides a comprehensive analysis of Meituan's integration of digital and green technologies, highlighting the role of sustainable innovation management in addressing contemporary business challenges. The findings underscore the critical importance of aligning corporate strategies with environmental objectives and leveraging technological advancements to enhance competitiveness. Several key insights emerge from this research:

Key Findings and Implications

1. Strategic Adaptability: Meituan's innovation strategy demonstrates the significance of maintaining flexibility in the face of dynamic market conditions. By integrating digital tools with green technologies, the company has successfully navigated challenges such as resource constraints and regulatory pressures.
2. Organizational Strength: A well-structured organization, supported by robust talent development programs, fosters a culture of innovation. Meituan's emphasis on cross-functional collaboration and employee engagement has been instrumental in driving sustainable practices.
3. Technological Integration: The use of digital platforms for resource optimization and decision-making exemplifies the transformative potential of technology in achieving sustainability. Meituan's application of AI and big data analytics in logistics and customer service demonstrates how digital tools can reduce waste and enhance efficiency.
4. Collaborative Ecosystems: Partnerships with academic institutions, industry stakeholders, and government bodies have played a vital role in advancing Meituan's sustainability agenda. These collaborations highlight the importance of a multi-stakeholder approach to innovation.
5. Policy Alignment: Meituan's success underscores the need for supportive regulatory frameworks that incentivize green innovation. The alignment of

corporate strategies with national sustainability goals can create a conducive environment for transformative growth.

Industry Applications and Policy Recommendations

The findings of this study have significant implications for industries beyond Meituan's domain. Enterprises across sectors can draw lessons from Meituan's practices to design innovation strategies that balance profitability with environmental responsibility. Policymakers are encouraged to create incentives for green technology adoption and foster collaborative ecosystems that support sustainable business models.

Future Research Directions

While this study focuses on Meituan, future research could explore the scalability of its practices in different cultural and economic contexts. Additional studies could investigate the challenges of implementing green technologies in emerging markets or the role of digital transformation in addressing social sustainability issues.

Concluding Remarks

In conclusion, Meituan's integration of digital and green technologies offers a valuable framework for achieving sustainability in the corporate sector. By prioritizing adaptability, technological innovation, and collaborative ecosystems, enterprises can navigate the complexities of a rapidly evolving global landscape. The lessons from Meituan's journey provide actionable insights for businesses, policymakers, and academic researchers striving to create a sustainable and equitable future.

This study reaffirms the transformative potential of digital and green synergies, emphasizing their critical role in shaping the next generation of sustainable enterprises.

REFERENCES

1. Geissdoerfer, M., Vladimirova, D., & Evans, S. (2018). Sustainable business model innovation: a review. journal of cleaner production, 198, 401-416.

2. Horn, C., & Brem, A. (2013). Strategic directions on innovation management-a conceptual framework. management research review, 36(10), 939-954.

3. Chen Wenbei, Wen Mei, & He Minghua. (2021). Sustainable Development and Corporate Social Responsibility based on Triple Bottom line. Science and Technology Information, 19(10), 3.

4. Tang, M., Liu, Y., Hu, F., & Wu, B. (2023). Effect of digital transformation on enterprises' green innovation: empirical evidence from listed companies in China. energy Economics Energy Economics , 128, 107135.

5. Xue, L., Zhang, Q., Zhang, X., & Li, C. (2022). Can digital transformation promote green technology innovation? Sustainability, 14(12), 7497.

6. Weissenberger-Eibl, M. A., & Hampel, T. (2021). Bridging the gap: integrating external knowledge from open innovation platforms. SN Business & Economics, 1(7), 98.

7. Choi, Y., Zhang, L., Debbarma, J., & Lee, H. (2021). Sustainable management of online to offline delivery apps for consumers' reuse intention: focused on the Meituan apps. sustainability," Journal of Sustainability," Journal of Business and Economics, vol. 13(7), 3593.

8. Tao, L. (2022). Transformation and Innovation of Business Model. In Huawei Wisdom: Develop Strategy to Execution at Critical Moments (pp. 145-180). Singapore: Springer Nature Singapore.

9. Liu, Y., Peng, R., & Wang, S. (2023, February). The Impact of Technological Innovation in Takeout Industry on Consumers. In Proceedings of the 4th International Conference on Economic Management and Model Engineering, ICEMME 2022, November 18-20, 2022, Nanjing, China.

10. Asa, A. R., Yusupov, S., & Nautwima, J. P. (2023). Harnessing the power of mergers and diversification: The success story of Meituan-Dianping. International Journal of Management Science and Business International Journal of Management Science and Business Administration, 9(4), 42-51.

11. Tolstykh, T., Gamidullaeva, L., & Shmeleva, N. (2020). Elaboration of a mechanism for sustainable enterprise development in innovation ecosystems. Journal of Open Innovation: Technology, Market, and Complexity, 6(4), 95.

12. chen, s. h. (2016). The influencing factors of enterprise sustainable innovation: an empirical study. sustainability, 8(5), 425.

13. Zhang, Q., Yang, M., & Lv, S. (2022). Corporate digital transformation and green innovation: A quasi-natural experiment from integration of informatisation and industrialization in China. International Journal of Environmental Research and Public Health, 19(20), 13606.

14. Ning, J., Yin, Q., & Yan, A. (2022). How does the digital economy promote green technology innovation by manufacturing enterprises? Evidence from China. Science, 10, 967588.

15. Guo, M., Wu, L., Peng, J., & Chiu, C. H. (2021). Research on environmental issue and sustainable consumption of online takeout food-practice and enlightenment based on China Sustainability, 13(12) , 6722.

16. Fussler, C., & James, P. (1996). Driving eco-innovation: a breakthrough discipline for innovation and sustainability. (No Title).

17. Schumpeter, J. A. (1939). Business cycles: A theoretical, historical and statistical analysis of the capitalist process.

18. Braun, E., & Wield, D. (1994). Regulation as a means for the social control of technology. Technology Analysis & Strategic Management, 6(3), 259-272.

19. Rennings, K. (2000). Redefining innovation-eco-innovation research and the contribution from ecological economics. Ecological economics, 32(2), 319-332 .

20. Ryan, M. (2015). A new world under construction: China and semiconductors.

21. Poo, M. M. (2021). Innovation and reform: China's 14th Five-Year Plan unfolds. National Science Review, 8(1), nwaa294.

22. Zhao, W., & Zou, Y. (2015). Green university initiatives in China: a case of Tsinghua University. international Journal of Sustainability in Higher Education, 16(4), 491-506.

23. Zhang, N. (2023). Impact of Supplier Concentration on R&D Investment. Highlights in Business, Economics and Management, 17, 105-114.

24. Kesidou, E., & Demirel, P. (2012). On the drivers of eco-innovations: Empirical evidence from the UK. research policy, 41(5), 862-870.

25. Gong, X. Y. (2022). Enterprise digital transformation: Literature review and research prospect. Industrial Economic Review, 13(01), 40-47.

26. Hongbo, P., & Jinhui, G. (2022). Digital Transformation and Enterprise Innovation: Empirical Evidence Based on the Annual Reports of Listed Companies in China [J]. Journal of Central South University (Social Science Edition), 2022, 28 (05): 107, 121.

27. Ilvonen, I., Thalmann, S., Manhart, M., & Sillaber, C. (2018). Reconciling digital transformation and knowledge protection: a research agenda. knowledge management research & practice, 16(2), 235-244.

28. Henfridsson, O., Nandhakumar, J., Scarbrough, H., & Panourgias, N. (2018). Recombination in the open-ended value landscape of digital innovation. information and organisation, 28(2), 89-100.

29. Shi, J., & Xiao, Z. (2024). Research on the Impact of Inter-Industry Innovation Networks on Collaborative Innovation Performance: a Case Study of Strategic Emerging Industries. Systems, 12(6), 211.

30. Hou, Zian & Li, Yalong & Zhang, Weiquan. (2023). Analysis Meituan's Current Situation and Development Strategy. BCP Business & Management. https://bcpublication.org/index.php/BM/article/view/3836.

31. Shi, L., Han, L., Yang, F., & Gao, L. (2019). The evolution of sustainable development theory: Types, goals, and research prospects. sustainability, 11(24), 7158.

32. Marinelli, M. (2018). How to build a 'Beautiful China' in the Anthropocene. the political discourse and the intellectual debate on ecological civilisation. journal of Chinese Political Science, 23(3), 365-386.

33. Chen, Y. S., Lai, S. B., & Wen, C. T. (2006). The influence of green innovation performance on corporate advantage in Taiwan. Journal of business ethics, 67, 331-339.

34. Liu, D. Y., Chen, S. W., & Chou, T. C. (2011). Resource fit in digital transformation: Lessons learned from the CBC Bank global e-banking project. Management Decision, 49(10), 1728- 1742. 1742.

35. Porter, M. E., & Kramer, M. R. (2011). Creating shared value. *Harvard Business Review*, 89(1/2), 62–77.

36. Bocken, N. M., Short, S. W., Rana, P., & Evans, S. (2014). A literature and practice review to develop sustainable business model archetypes. *Journal of Cleaner Production*, 65, 42–56.

37. Weng, H. H., Chen, J. S., & Chen, P. C. (2015). Effects of green innovation on environmental and corporate performance: A stakeholder perspective. *Sustainability*, 7(5), 4997–5026.

38. Lüdeke-Freund, F., Carroux, S., Joyce, A., Massa, L., & Breuer, H. (2018). The sustainable business model pattern taxonomy—45 patterns to support sustainability-oriented business model innovation. *Sustainable Production and Consumption*, 15, 145–162.

39. Iansiti, M., & Lakhani, K. R. (2020). Competing in the age of AI: Strategy and leadership when algorithms and networks run the world. *Harvard Business Review Press*.

40. Eccles, R. G., Ioannou, I., & Serafeim, G. (2014). The impact of corporate sustainability on organizational processes and performance. *Management Science*, 60(11), 2835–2857.

41. Ghosh, S. K. (2021). Green technologies and environmental sustainability. *Springer Nature*.

42. Hart, S. L., & Milstein, M. B. (2003). Creating sustainable value. *Academy of Management Perspectives*, 17(2), 56–67.

43. Markard, J., Raven, R., & Truffer, B. (2012). Sustainability transitions: An emerging field of research and its prospects. *Research Policy*, 41(6), 955–967.

44. Boons, F., & Lüdeke-Freund, F. (2013). Business models for sustainable innovation: State-of-the-art and steps towards a research agenda. *Journal of Cleaner Production*, 45, 9–19.