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RESEARCH ARTICLE

Selection Path of Business Model Innovation in Fast Fashion Enterprises from the Perspective of Windows of Opportunity-The case of SHEIN and ZARA

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Abstract
Based on the perspective of the windows of opportunity, this study explores the paths of business model innovation in fast fashion enterprises, using SHEIN and ZARA as case studies. The research finds significant differences between the two companies in terms of supply chain models, marketing strategies, and globalization approaches, reflecting distinct logics of business model innovation in the digital era versus the traditional retail era. The windows of opportunity provides enterprises with development prospects in the external environment, while dynamic capabilities determine whether enterprises can identify, seize, and leverage these opportunities. By effectively identifying and utilizing the windows of opportunity and further aligning dynamic capabilities, enterprises can enhance their business model innovation capabilities. This paper offers theoretical support and practical insights for enterprises to improve competitiveness and sustain high-quality development through business model innovation.

Keywords: Business Model Innovation; Windows of Opportunity; Dynamic Capabilities; Fast Fashion Enterprises

Introduction

The business model is the foundational architecture through which enterprises create, deliver, and capture value (Teece, 2007). With the rapid development of technologies such as information technology, big data, artificial intelligence, and block-chain, the concept of business model innovation has garnered widespread attention(Li Panpan, Qiao Han & Guo Tao, 2022;Liu Yang, Ying Zhenzhou & Ying Ying, 2021). Business model innovation is an organizational transformation process that creates, delivers, and captures value for stakeholders through new value propositions. It enables enterprises to develop new competitive advantages, acquire new market resources, and identify new economic growth opportunities, serving as a key driver for sustained development and maintaining competitiveness（Wu Xiaobo & Zhao Ziyi, 2017). In the era of the digital economy, the fast fashion industry faces numerous development opportunities while also needing to address challenges such as

environmental sustainability, supply chain transparency and changing consumer demands(Casciani, Chkanikova & Pal, 2022;Choi, Hui & Liu, 2014;Du Jianguo & Hu Jizhe, 2022). As representative enterprises in the fast fashion industry, SHEIN and ZARA exhibit significant differences in business models, supply chain management, market positioning, and branding strategies. A comparative analysis of the business model innovation paths of SHEIN and ZARA holds great significance for driving fast fashion enterprises and other small and medium-sized enterprises to seize development opportunities and achieve digital transformation. Based on the perspective of the windows of opportunity, this paper explores the business model innovation paths of fast fashion companies, aiming to provide theoretical support for enterprises to enhance competitiveness and sustain high-quality development through business model innovation.

Literature Review

Windows of Opportunity

The concept of the "windows of opportunity" was first proposed by Perez and Soete (1988) to explain the phenomenon of technological catch-up by latecomer countries from a cross-paradigm perspective. It refers to various catch-up opportunities that arise during the catch-up cycle. They argued that latecomers could achieve catch-up by leveraging the transition of new technological-economic paradigms. The drivers of the windows of opportunity have been further developed with the extensive academic research on latecomers' catch-up. For example, Mathews (2005) notes that shifts in the business cycle and market demand can also create a new windows of opportunity for latecomers to realize catch-up. Guennif and Ramani (2012) discover that modifications to government-enacted regulations and industry strategies also provide latecomers with the opportunity to catch up. Scholars currently divide windows of opportunity into three categories: technological, demand, and institutional/policy (Lee & Malerba, 2017). These three dimensions also form the basis of the majority of the current study, which looks at how latecomers can take advantage of windows of opportunity to overtake incumbents over a sizable amount of time.

Dynamic capacity

Dynamic capabilities refer to an enterprise's ability to acquire, integrate, build, and reconfigure internal and external resources to cope with rapidly changing environments (Teece, Pisano & Shuen, 1997;Jiao Hao, Wei Jiang & Cui Yu, 2008). Their core lies in emphasizing the synergistic effects of organizational processes, asset positions, and evolutionary paths. Dynamic capabilities can be divided into sensing capacity, seizing capacity, and reconfiguring capacity (Teece, 2007). The dynamic capabilities not only enhance the efficiency of enterprises' utilization of digital technologies but also enable the reconfiguration of resources to lead continuous business model innovation(Heaton, Teece & Agronin, 2023). Enhancing dynamic capabilities helps enterprises seize the windows of opportunity during paradigm shifts, coordinate multiple strategic decisions, and provide resource and capability support(Jiao Hao, Yang Jifeng & Ying Ying, 2021).

Business Model Innovation

Business model innovation is a key means for enterprises to build new competitive advantages and profit models (Chen Jin, Yang Yang & Yu Junbo, 2022). Its realization process is often based on three elements: target customers, value propositions, and supply chains. Through continuous resource reorganization, process optimization, and model adjustments, new business logics are established(Feng Lijie, Xu Meiqi & Feng Yicheng, 2024). Business model innovation is a complex coupling process driven by a combination of internal

and external factors (Zott, Amit & Massa, 2011). Based on driving factors, Chen Jin (2022) categorizes business model innovation into five types: driven by internal resource capabilities, driven by enterprise managers, driven by technological innovation, driven by market demand, and driven by industry competition. Since business model innovation itself is a qualitative phenomenon, it is difficult to precisely simplify it into specific data. The academic community mainly uses qualitative evaluation models and a combination of qualitative and quantitative methods to assess the effects of business model innovation. From the perspectives of technology and innovation management, the impact of business model innovation on enterprise capabilities, performance, and industry and market structures is explored (Chesbrough & Rosenbloom, 2002).

Digital Transformation of Fast-Fashion Enterprises

The digital transformation of fast-fashion enterprises has become a hot topic in academia in recent years. Its core lies in how digital technologies can reshape the operational models of fast-fashion companies by optimizing supply chain management, enhancing consumer experiences, and promoting sustainable development. Relevant research primarily explores three dimensions: technological application, business model transformation, and sustainability. In terms of technological application, scholars generally agree that digital technologies such as big data, artificial intelligence (AI), and virtual reality (VR) have significantly transformed traditional business processes in the fast-fashion industry, improving supply chain transparency, agility, and efficiency. For instance, Bertola and Teunissen (2018) noted that big data analytics and AI enable fast-fashion companies to accurately predict consumer trends and respond swiftly to market demands, thereby optimizing inventory management and increasing turnover efficiency. Regarding business model transformation, digitalization has given rise to "D2C" (direct-to-consumer) and "ultra-fast fashion" models. The integration of social media and e-commerce platforms has strengthened consumer engagement and driven personalized marketing. For example, AI-powered recommendation systems, by analyzing consumer behavior data, have significantly boosted purchase conversion rates and customer loyalty (Casciani et al, 2022).

In the context of sustainability, scholarly opinions diverge (Freitag et al, 2021;Gueler & Schneider, 2021; Muench et al, 2022; Santarius et al, 2023). Some argue that digitalization reduces resource waste through precision production, fostering a circular economy. Others criticize digital marketing for encouraging overconsumption and resource depletion, thereby exacerbating environmental sustainability challenges. Additionally, while digitalization has lowered the costs of collecting, analyzing, and storing data, issues related to data security risks and user privacy remain unresolved. Enterprises must carefully assess their use of consumer data, investing in privacy-enhancing technologies to strike a dynamic balance between data value extraction and privacy protection, thereby driving innovation and marketing (Bleier, Goldfarb & Tucker, 2020; Shirkhani, Mokayed & Saini,2023). Overall, digital transformation presents both opportunities and challenges for fast-fashion enterprises. Future research should further explore how to balance efficiency and sustainability while addressing contradictions at technological, economic, and socio-behavioral levels.

Review of research

Existing studies have established a relatively systematic theoretical framework around theories such as the opportunity window and dynamic capabilities(Ma Liang, Gao Jun & Zhong Weijun, 2023; Peng Xinmin, Zhang Qirui & Liu Dengguang, 2022;Warner & Wager, 2019;Zahra, Sapienza & Davidsson, 2006). However, there remain several areas worthy of deeper exploration: First, research on the opportunity window has focused on three driving factors—technology, demand, and institutions—primarily explaining the causes of opportunity windows and how they function at different analytical levels. Yet, there is insufficient analysis of their interactions and industry-specific mechanisms. Second, while dynamic capability theory emphasizes the

importance of resource reconfiguration, it lacks exploration into the micro-level formation paths of dynamic capabilities within enterprises. Third, although there is a wealth of research on business model innovation, it tends to be qualitative, lacking quantitative evaluation tools. Most studies focus on single dimensions, examining the impact or moderating effects of individual factors, with few adopting a systemic, multi-factor perspective to analyze the pathways of business model innovation. Finally, for fast-fashion enterprises, digital transformation is not merely a technological upgrade but also an opportunity for a systemic shift toward sustainable business models. Current research falls short in addressing the "efficiency versus sustainability" paradox. This paper aims to integrate opportunity window theory to analyze dynamic capabilities and business model innovation pathways, providing theoretical insights and references for enterprises seeking to achieve business model innovation.

Methodology

Research methodology

This paper selects the dual-case comparative research method for the following reasons. First of all, the research question is explanatory in nature, exploring the mechanism through which dynamic capabilities influence business model innovation and why enterprises in the same industry choose different paths of business model innovation when facing windows of opportunity. While the case study is suitable for addressing "how" and "why" types of research questions. Secondly, compared with single-case studies, comparative case design can better identify causal and matching relationships, improving the accuracy and generalizability of the study.

Case selection

This paper selects SHEIN and ZARA from the fast fashion industry as case studies, primarily based on the following criteria.

Principle of polarization type. The two case enterprises exhibit significant differences in business models, supply chain management, product innovation, and market strategies, reflecting different market adaptability and innovation capabilities. Their innovation paths reflect the strategic choices of fast fashion enterprises under different era backgrounds. ZARA represents the classic model of traditional fast fashion, with its core competitiveness lying in its vertically integrated supply chain and rapidly responsive store model. On the other hand, SHEIN represents the emerging model of the digital era, achieving "ultra-fast fashion" business model innovation through big data analysis, social media marketing, and a globalized supply chain network. These differences provide a multi-dimensional perspective, which makes the study feasible and valuable.

Industry Typicality Principle. SHEIN and ZARA are both representative companies in the fast fashion industry, representing emerging digital fast fashion brands and traditional fast fashion giants. ZARA was founded in 1975, as the pioneer of the fast fashion industry, with its efficient supply chain and rapid response business model. SHEIN was founded in 2008, has rapidly emerged as a newcomer in recent years with its digital technology and globalized e-commerce platform.

Principle of data availability. As a publicly listed firm, ZARA has abundant publicly available information, making it easier for researchers to access and analyze. Although SHEIN is not publicly listed, as a representative of digital fast fashion, it has garnered significant attention in recent years, with abundant media coverage, industry analysis, and market data, making the research results more reliable and persuasive.

The basic information of the case companies is shown in Table 1.

Table 1: Basic Information of Case Companies

	SHEIN	ZARA
Established	2008	1975
Headquarters	Guangzhou, China / Singapore	Spain
Main Markets	America, Middle East, etc.	Europe, America, Asia, etc.
Business Model	online	online and offline integration
Business Scope	Retail, Wholesale, Consulting, Design, Network Services, etc.	Design, Production, Distribution, Retail, etc.
Brands	SHEIN, ROMWE, MOTF, DAZY, etc.	ZARA, ZARA HOME, Bershka, etc.
Main Products	Clothing, Home Goods, Pet Supplies, etc.	Clothing, Home Goods, Cosmetics, etc.

Data sources

The case data in this paper mainly comes from secondary data: (1) Company's official website, corporate annual reports, industry reports of professional institutions, etc.; (2) Academic journals, related books, news reports, etc.; (3) Social media platforms, information from public interviews with executives, etc. Cross-validation of multiple information sources can ensure the accuracy and adequacy of case data.

Variable Measurement

Windows of Opportunity

This paper divides windows of opportunity into three types: technological, demand and institutional/policy. The specific measurements are detailed in Table 2.

Table 2: List of windows of opportunity types, meanings and keywords

Type	Meaning	Keywords
Technological Window	Opportunities arising from new technological developments	Technological innovation, technological breakthroughs, technological change, R&D investment, technological substitution, etc.
Demand Window	Opportunities created by new demands or business cycles	Market demand, market trends, market segmentation, consumer preferences, market expansion, market positioning, etc.
Institutional/Policy Window	Opportunities brought by changes in policy interventions or broad institutional conditions	Policy support, regulatory changes, industry standards, institutional environment, institutional innovation, policy dividends, etc.

Dynamic Capabilities

This paper divides dynamic capabilities into three types: sensing capacity, seizing capacity and re-configuring capacity. The specific measurements are detailed in Table 3.

Table 3: List of dynamic capability types, meanings and keywords

Type	Meaning	Keywords
Sensing Capacity	The ability of a firm to identify, acquire and digest new knowledge from the external environment	Knowledge acquisition, technology introduction, information recognition, R&D investment, external cooperation, knowledge application, etc.
Seizing Capacity	The ability to optimize the layout of production and operation activities , achieve effective allocation of manpower, material and time resources	Resource integration, organizational coordination, cross-departmental collaboration, process optimization, information sharing, knowledge integration, project management, etc.
Reconfiguring Capacity	The ability to stimulate creative thinking, improve innovation efficiency, and link upstream and downstream resources in the supply chain	Technology innovation, product innovation, process innovation, business model innovation, R&D capability, technology iteration, technology breakthroughs, etc.

Business model innovation

This paper divides business model innovation into disruptive and incremental. The specific measurements are shown in Table 4.

Table 4: List of business model innovation types, meanings and keywords

Type	Meaning	Keywords
Disruptive	Innovation that introduces entirely new value propositions, resource allocation methods, or profit models, fundamentally changing the existing market competition landscape and industry rules	Business model reshaping, value network restructuring, industry restructuring, changing competitive landscape, market disruption, new technology-driven, etc.
Incremental	Continuous improvement and optimization of existing models to enhance enterprise competitiveness and operational efficiency, without causing drastic impacts on the existing market landscape	Efficiency enhancement, technology upgrade, product optimization, process optimization, cost reduction, customer experience enhancement, optimal allocation of resources, etc.

Results and Discussion

Within-Case Analysis and Main findings

SHEIN's Business Model Innovation Path

SHEIN's development can be divided into three stages: the start-up phase (2008-2013), the branding phase (2014-2019), and the platformization phase (2020-present). Key development milestones are shown in **Figure 1**.

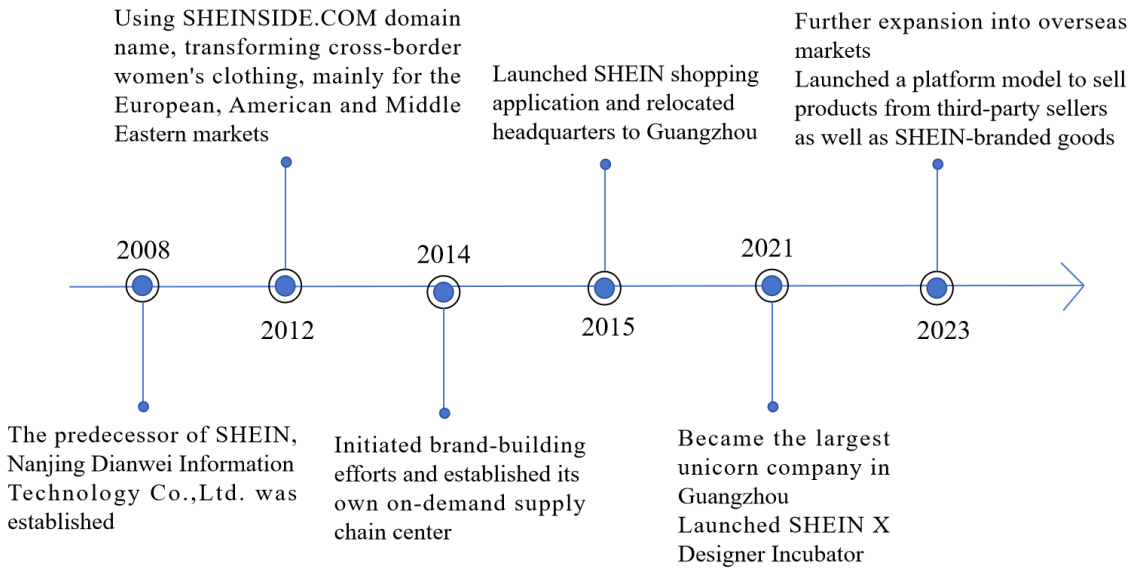

Figure 1. SHEIN' s Development Timeline

Start-up Phase (2008-2013)

In 2008, SHEIN's predecessor, Nanjing Dianwei Information Technology Co., Ltd. was established, operating a cross-border wedding dress export business, mainly targeting the European, American and Middle Eastern markets. In 2011, SHEIN leveraged internet influencers for promotional campaigns on social media platforms. In 2012, the profit margins for exporting wedding dresses to Europe and the U.S. gradually diminished, prompting the company to shift its focus to cross-border women's fashion. In 2013, the product categories expanded to include accessories, cosmetics, and footwear. More information is shown in Table 5.

At the start-up phase, SHEIN relies on the rise of cross-border e-commerce and China's supportive foreign trade policies, leveraging the cost advantages of Chinese manufacturing to reduce initial investment and operational costs. Simultaneously, the company utilized search engine optimization (SEO) and social media to acquire traffic at low marketing costs, gaining market traction through affordable and trendy products. During this phase, SHEIN optimized the traditional cross-border e-commerce model through its e-commerce platform and low-price strategy, representing incremental business model innovation.

Table 5: SHEIN Start-up Phase (2008-2013)

Concept	Measured Variable	Keywords
Windows of Opportunity	Technological Window	Internet and e-commerce technology diffusion The rise of Search Engine Optimization The rise of Social Media
	Demand Window	Increased consumer demand for low-cost fashion products The rise of the Influencer Economy The rise of cross-border e-commerce
	Institutional/Policy Window	Chinese government policy support for cross-border e-commerce Initial improvement of global logistics infrastructure
Dynamic Capability	Sensing Capacity	Learning and applying cross-border e-commerce operation models to quickly enter global markets Absorbing social media marketing techniques and methods for low-cost customer acquisition Attracting international traffic through SEO
	Seizing Capacity	Adjusting product design and selection strategy based on demand Optimizing supply chain processes to reduce production and distribution costs
	Reconfiguring Capacity	Leveraging China's robust manufacturing base to establish an efficient supply chain Adopting a data-driven product selection model to quickly capture global fashion trends
Business Model Innovation	Incremental	Collaborating with small and medium-sized domestic garment manufacturers to reduce production costs Reducing intermediate links through cross-border e-commerce to lower costs Leveraging social media marketing for low-cost customer acquisition and brand awareness Establishing an independent website "SHEINSIDE.COM" to control brand image and optimize user experience Optimizing keywords and website structure to improve search engine rankings and attract traffic

Branding Phase (2014-2019)

In 2014, SHEIN started brand building, focusing on fast fashion women's apparel and targeting high-value overseas markets. It acquired the fashion brand ROMWE and started building its own supply chain center. In 2015, SHEIN launched its shopping app and the headquarters was moved to Panyu in Guangzhou, China. By 2018, SHEIN had expanded globally, serving markets in the U.S., Europe, the Middle East, India, Southeast Asia and other markets. During this phase, SHEIN seized the market demand and technological advancements,

transitioning from a cross-border e-commerce platform to a fast fashion brand with its own supply chain center and digital platform. More information is shown in Table 6.

At the branding phase, SHEIN adopted a "small-order, quick-response" model and a data-driven product selection strategy, fundamentally altering the traditional fast fashion supply chain logic. This enabled faster product launches and lower inventory risks, representing disruptive business model innovation.

Table 6: SHEIN Branding Phase (2014-2019)

Concept	Measured Variable	Keywords
Windows of Opportunity	Technological Window	Developments in Big Data and AI Technologies The popularity of smartphones and mobile payments
	Demand Window	Rapid growth of the fast fashion market Increased consumer demand for affordable and trendy clothing
	Institutional/Policy Window	Improvement of logistics infrastructure Optimization of cross-border e-commerce policies
Dynamic Capability	Sensing Capacity	Leveraging social media marketing to enhance brand awareness Utilizing big data to optimize product selection and inventory management
	Seizing Capacity	Optimizing global logistics networks to improve delivery efficiency and rapidly expand markets Adjusting production and replenishment strategies based on market feedback to reduce inventory risks
	Reconfiguring Capacity	Establishing an in-house supply chain to quickly launch new products and reduce inventory risks Building an independent e-commerce platform to directly reach consumers, reducing intermediaries and increasing profit margins Implementing a "small-order, quick-response" model to test market reactions with small production runs
Business Model Innovation	Disruptive	Testing market reactions with small production runs and rapidly adjusting production plans based on sales data Investing heavily in supply chain digitalization and developing a proprietary supply chain management system Leveraging big data and AI to accurately capture fashion trends Establishing more warehouses globally to further reduce delivery times Implementing differentiated and localized strategies based on regional cultural and consumer preferences Deepening social media and influencer marketing strategies to enhance brand awareness and user engagement

Platformization Phase (2020-present)

In 2020, SHEIN cooperated with TikTok, benefiting from the platform's early traffic support. In 2021, SHEIN replaced AMAZON as the most downloaded shopping app on IOS and Android platforms in the U.S. The same

year, SHEIN became the largest unicorn company in Guangzhou. In the same year, SHEIN became the largest unicorn enterprise in Guangzhou. In 2023, SHEIN officially announced its platform model, aiming to drive the transformation and upgrading of traditional industries and leverage its leading role. In 2024, SHEIN launched the SHEIN Exchange second-hand trading platform, promoting green and low-carbon circular development in the fashion industry. More information is shown in Table 7.

During the platformization phase, SHEIN's "small-order, quick-response" model and digital supply chain gradually matured. Leveraging the widespread adoption of social media and mobile internet, SHEIN achieved platformization and diversification. This further enhanced operational efficiency and optimized customer experience, although the core logic of fast fashion remained fundamentally unchanged, representing incremental business model innovation.

Table 7: SHEIN Platformization Phase (2020-Present)

Concept	Measured Variable	Keywords
Windows of Opportunity	Technological Window	The Rise of Social Media Maturation of Big Data, Artificial Intelligence and Supply Chain Digitization Technologies
	Demand Window	Increased consumer focus on environmental and social responsibility Rising demand for online shopping during the pandemic Growing consumer demand for personalized recommendations and customized shopping experiences
	Institutional/Policy Window	Cross-border e-commerce policy optimization Policy support for sustainable development Cooperation with Southern Air Logistics Co., Ltd.
Dynamic Capability	Sensing Capacity	Investing in and applying AI and augmented reality technologies to optimize demand forecasting and inventory management Learning and applying short-video platform marketing strategies for low-cost customer acquisition Leveraging big data and AI to optimize the entire process from design to delivery, shortening product launch cycles Analyzing user behavior data to accurately predict market demand and optimize product design and inventory management Adopting sustainable development technologies to launch eco-friendly product lines Learning localization strategies in emerging markets to optimize regional supply chains and logistics networks
	Seizing Capacity	Collaborating with designers and launching limited-edition products to expand markets Leveraging large-scale social media marketing to enhance brand influence Rapidly adjusting supply chain and logistics strategies based on market changes

	Reconfiguring Capacity	Optimizing omni-channel retail models to improve user experience Optimizing platform operations to attract third-party sellers Digitizing the supply chain to achieve more efficient production and delivery Establishing local warehousing and logistics systems in key and emerging markets Launching the SHEIN Exchange second-hand trading platform Introducing eco-friendly product lines (e.g., "SHEIN X" series) and recycling programs Expanding diversified businesses to build a comprehensive e-commerce platform
Business Model Innovation	Incremental	Implementing a "self-owned brand & platform" model Launching multiple overseas expansion plans Digitizing the supply chain network, connecting suppliers to a cloud-based system for real-time sharing of order, capacity, and fabric inventory data to ensure efficient supply chain operations Leveraging data-driven user operations to further enhance user experience and conversion rates Launching the SHEIN Exchange second-hand trading platform to promote a circular economy

ZARA's Business Model Innovation Path

ZARA's business model innovation path centers on a vertically integrated supply chain, achieving sustained market leadership through rapid response, data-driven, omni-channel retailing and globalization. Its development history can be divided into the start-up phase (1975-1987), the external expansion phase (1988-2000) and the globalization and digitalization phase (2001-present), as shown in **Figure 2**.

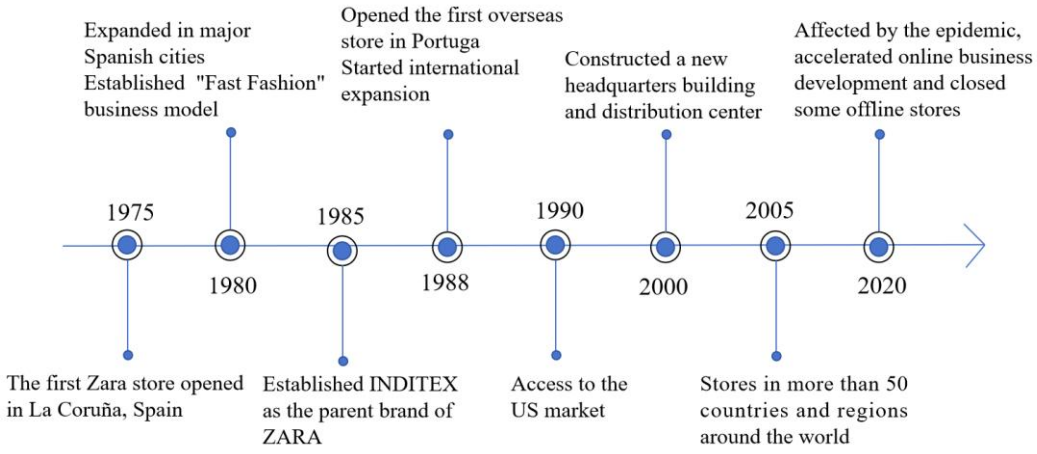

Figure 2: ZARA's Development Timeline

Start-up Phase (1975-1987)

In 1975, ZARA opened its first retail store in La Coruña, Spain. From 1976 to 1984, the company expanded to major cities across Spain. In 1985, INDITEX was established as the parent brand of ZARA, setting the tone for the group's future development. From 1986 to 1987, the group focused on the development of ZARA stores, laying the foundation for a supply chain capable of supporting rapid growth. More information is shown in Table 8.

During the start-up phase, ZARA accumulated extensive operational experience and market recognition in the Spanish domestic market. Through vertical integration and rapid market response, ZARA established the fast fashion model, fundamentally altering the traditional apparel industry's supply chain logic and achieving disruptive business model innovation.

Table 8: ZARA Start-up Phase (1975-1987)

Concept	Measured Variable	Keywords
Windows of Opportunity	Technological Window	Initial application of information technology (e.g., ERP systems)
	Demand Window	Consumer demand for diverse and personalized clothing Saturation of the Spanish domestic market
	Institutional/Policy Window	Acceleration of the globalization process In the run-up to Spain's accession to the European Union Spanish government support for the manufacturing industry
Dynamic Capability	Sensing Capacity	Adopting information technologies to optimize supply chain management Learning and applying the vertical integration model to control the whole process from design, production to sales
	Seizing Capacity	Rapidly adjusting product design and production plans according to market demand Offering a wide range of styles to meet consumer demand for diversity Adopting small-oder production strategies to reduce inventory risks Optimizing supply chain processes to reduce production times/costs
	Reconfiguring Capacity	Launching the "fast fashion" model to meet consumer demand through small batches and multiple styles Establishing a vertically integrated supply chain system to rapidly respond to market demand
Business Model Innovation	Disruptive	Pioneering the "multiple styles, small order" production model Rapidly adjusting production plans based on market feedback Adopting a vertically integrated supply chain to control the entire process from design to sales, ensuring rapid response to market demand Establishment of own factories and logistics centers to ensure timely delivery of products

External Expansion Phase (1988-2000)

In 1988, ZARA opened its first overseas store in Portugal, marking the beginning of its international expansion. In 1989, the company entered the U.S. market with a store in New York. In 1990, ZARA expanded to France with a store in Paris. In 1991, the brand PULL&BEAR was established, further segmenting the fashion market and beginning its diversification strategy. From 1992 to 1994, ZARA expanded to Greece, Belgium, and Sweden. In 1995, the acquisition of MASSIMO DUTTI Group and opened a store in Malta. In 2000, ZARA had established a presence in Austria, Denmark, Qatar, and Andorra, while also building a new headquarters and distribution center in Arteixo, Spain, to enhance its core capabilities for fast delivery. More information is shown in Table 9.

In this phase, ZARA has expanded its business to markets in Europe, America and Asia through its multi-brand strategy and gradually expanding international layout, establishing itself as a leader in the global fashion retail industry. Through the combination of standardization and localization, ZARA rapidly expanded its market share by opening directly operated stores, ensuring brand consistency and service quality. This phase represented incremental business model innovation.

Table 9: ZARA External Expansion Phase (1988-2000)

Concept	Measured Variable	Keywords
Windows of Opportunity	Technological Window	The rise of e-commerce Advances in logistics and information technology
	Demand Window	Increased consumer acceptance of international brands Increased consumer demand for products that combine standardization and localization
	Institutional/Policy Window	Globalization trends European economic integration National liberalization policies for retailing
Dynamic Capability	Sensing Capacity	Gaining experience in the domestic market and gradually adapting the business model to international markets Learning and applying global operational experience for rapid entry into new markets Absorption of logistics and information technology to optimize global supply chain management
	Seizing Capacity	Opening flagship stores in international cities like New York to enhance global brand awareness Adjusting marketing strategies based on local market demand Leveraging the fast fashion model to quickly capture and respond to fashion trends, meeting consumer demand Optimizing global logistics networks to improve delivery efficiency
	Reconfiguring Capacity	Building a new headquarters and distribution center Launching directly operated stores to ensure brand consistency and customer experience

Business Model Innovation	Incremental	Establishing a standardized yet localized operational model Gradually entering other markets, rapidly expanding store networks to enhance brand influence Accelerating global expansion and implementing localized operations based on regional cultural and consumer preferences Frequent visits by design teams to fashion shows and events in Paris and Milan to capture the latest trends Leveraging data analysis and store feedback to optimize product portfolios and inventory management Optimizing supply chains and scaling production to offer affordable, high-value products Enhancing store design and displays to improve customer experience and build a premium fast fashion brand image

Globalization and digitization Phase (2001-present)

In 2001, INDITEX went public, providing financial support for further expansion. From 2002 to 2006, ZARA opened stores in many countries such as Finland, Singapore, Russia, Slovakia, Slovenia, Malaysia, Indonesia, Thailand, etc. In 2010, ZARA launched online stores in Spain, France, and Italy. In 2012, ZARA launched its online store in China. In 2018, ZARA opened its first click-and-collect store in London, offering smart fitting rooms and self-checkout services. In 2022, ZARA collaborated with a Chinese designer brand for the first time, launching a co-branded collection. In 2024, based on local sales performance, overall brand image, and future potential, ZARA adjusted its offline store strategy, closing stores in multiple cities to target higher-end markets. More information is shown in Table 10.

During this phase, ZARA further consolidated its leading position in the fashion retail industry through global expansion and digital transformation. By leveraging digital technologies, intelligent supply chains, omni-channel retail models, and sustainable development strategies, ZARA optimized customer experience and operational efficiency, achieving incremental business model innovation.

Table 10: ZARA Globalization and Digitization Phase (2001-present)

Concept	Measured Variable	Keywords
Windows of Opportunity	Technological Window	Popularization of the Internet and mobile technologies Application of AI, big data, and IoT technologies Maturation of new retail technologies
	Demand Window	Consumer demand for online shopping Consumer demand for intelligent, personalized shopping experiences Rising consumer focus on environmental and sustainable development
	Institutional/Policy Window	Policy support for sustainable development by Governments Policy support for e-commerce by Governments Improvement of data privacy and security policies

Dynamic Capability	Sensing Capacity	Collaborating with designers and brands to launch premium product lines and enhance brand image Absorbing internet, AI and big data technologies to optimize supply chain management Learning and applying the omni-channel retail model to integrate online and offline channels Learning and applying sustainable technologies
	Seizing Capacity	Implementing omni-channel sales Increased investment in sustainable products and environmentally friendly materials Adaptation of product design and production processes to consumer demand for sustainability Enhancement of logistics and distribution capabilities and coordination of rapid response mechanisms for more distant markets Large multi-city store closures for store optimization Optimize data-driven operating models to improve demand forecasting accuracy
	Reconfiguring Capacity	Leveraging Internet technologies to optimize supply chain and inventory management, product design and marketing strategies Launching an omni-channel retail model, combining online and offline to provide a seamless shopping experience Introducing smart fitting rooms and self-checkout technologies in select stores to enhance customer experience Exploring platform models and collaborating with other brands to launch co-branded collections Launching eco-friendly product lines (e.g. "Join Life" series) and recycling programs
Business Model Innovation	Incremental	Leveraging data analysis and AI to analyze consumer behavior and preferences, offering personalized product recommendations to enhance shopping experience and conversion rates Supporting online orders, in-store pickups, and appointment -based fittings through mobile apps to enhance consumer-brand interactions Equipping stores with smart devices such as RFID tags and smart fitting rooms to help consumers quickly find sizes and styling suggestions while improving inventory management efficiency Using eco-friendly materials to reduce environmental impact Optimizing production processes and logistics to reduce carbon emissions and promote sustainable supply chains

Cross-Case Analysis and Main findings

As representatives of new-generation and traditional fast fashion enterprises, SHEIN and ZARA exhibit differences in their business model innovation paths in terms of supply chain models, marketing strategies, globalization strategies, sustainable development, and technological innovation. These differences not only reflect the two companies' varying market adaptability and innovation capabilities when facing different technological, market demand, and institutional change opportunities but also demonstrate the distinct logics of business model innovation in the digital era versus the traditional retail era. These cases provide diverse references for the fast fashion industry. In terms of supply chain models, SHEIN's "small-order, quick-response" model and data-driven product selection strategy represent a disruptive innovation in the traditional fast fashion industry. Its supply chain model emphasizes small-order production, rapid market testing, and quick replenishment based on demand, significantly reducing inventory risks. This model relies on big data and artificial intelligence technologies to quickly capture global fashion trends and optimize product design and inventory management. ZARA's supply chain model, centered on vertical integration, achieves rapid market response by controlling the entire process from design to sales. Although ZARA's model also emphasizes rapid response, its core logic still relies on physical stores and traditional supply chain management, representing incremental innovation.

In terms of data-driven strategies and marketing, SHEIN's marketing strategy emphasizes online interaction and user-generated content, leveraging social media and influencer marketing for low-cost customer acquisition and brand awareness. It also uses big data analytics to optimize product selection and inventory management. On the other hand, ZARA emphasizes offline experiences and brand consistency, integrating online and offline channels through an omni-channel retail model to provide seamless shopping experiences. While ZARA is gradually digitizing, its core still relies on the brand image and customer experience of physical stores.

In terms of globalization strategies, SHEIN emphasizes low-cost expansion and rapid response to market demand, quickly expanding to global markets through digital technologies and global e-commerce platforms. It has also established local warehousing and logistics systems in emerging markets (e.g., Southeast Asia, Latin America) to improve delivery efficiency and service quality. ZARA focuses more on brand consistency and customer experience optimization, expanding globally through directly operated stores and a combination of standardized and localized operational strategies. In terms of sustainability, SHEIN has responded to consumer demand for sustainable and eco-friendly products by launching the second-hand platform "SHEIN Exchange" and the eco-conscious line "evoluSHEIN." However, as its core business model still relies on ultra-low prices and rapid iteration, it faces accusations of "greenwashing." ZARA leveraging its vertically integrated system, has developed a comprehensive sustainability strategy covering everything from raw materials to retail. This includes promoting recycled materials through its "Join Life" collection, collecting old garments through in-store recycling programs, and investing in chemical recycling technology to regenerate blended fabrics. Its parent company, Inditex Group, is also actively seeking solutions for sustainable fashion. In 2022, Inditex signed a deal worth over € 100 million to acquire 30% of the recycled fabrics produced by Finland's Infinited Fiber Company, while exploring new processes and materials to enable textile recycling. Although ZARA is gradually refining its sustainability strategy, its core logic remains rooted in traditional supply chain management and brand image building.

In terms of management strategies, ZARA's founder, Amancio Ortega, disrupted the traditional "large-scale production + long cycle" paradigm of the apparel industry through his "anti-scale" decision to vertically integrate the supply chain. The "trinity" design system (store feedback + central design + regional buyers) ensures a balance between creativity and efficiency. This forward-looking strategic vision has allowed ZARA to maintain its industry-leading position for nearly half a century. In contrast, SHEIN's management team has

demonstrated the agile iteration capabilities essential in the digital era by keenly capturing the dividends of digitalization and embedding data-driven thinking into organizational memory through algorithms. Whether it's ZARA sacrificing some turnover speed to advance sustainability or SHEIN establishing its own factories in Brazil to mitigate geopolitical risks, these decisions ultimately reflect strategic trade-offs between short-term gains and long-term value. It is the managers' continuous insight into consumers' implicit needs and their creative solutions that drive sustained growth across economic cycles.

Overall, the business model innovation paths of SHEIN and ZARA illustrate how different companies make distinct choices and exhibit varying dynamic capabilities when facing opportunity windows. These cases also exemplify how dynamic capabilities drive business model innovation. In its early stages, SHEIN seized the cross-border e-commerce boom and fast-fashion market opportunities, establishing a new paradigm for fast-fashion e-commerce through disruptive business model innovation, achieving rapid growth and market leadership. Subsequently, with digitalization at its core, SHEIN leveraged flexible supply chain management, robust digital marketing, and sharp insights into emerging markets to implement continuous incremental business model innovations, adapting to market shifts and consumer demands. SHEIN's absorptive capacity (real-time trend detection from social media) directly supports its "small-order, quick-response" model, while its coordination capability (integrating fragmented global suppliers) enables rapid production adjustments once trends are identified. For instance, in 2023, SHEIN predicted the "balletcore" trend via TikTok data and launched related products within two weeks, doubling sales. On the other hand, ZARA established itself as an industry benchmark early on through disruptive business model innovation, centered on its vertically integrated supply chain and efficient pricing strategy, maintaining its leadership in the fast-fashion sector. Over time, it has continuously optimized its supply chain and store operations through incremental innovations to adapt to market changes and consumer preferences. ZARA's innovation capability (store data feedback system) sustains its rapid design iterations, while its adaptive capacity (closing underperforming stores and upgrading flagship locations) facilitates its transition into the premium market. For example, in 2024, ZARA closed 30 stores in China while opening a smart fitting concept store in Beijing, increasing its average transaction value by 15%.

Conclusion

This paper conducts a comparative analysis of SHEIN and ZARA from the perspective of windows of opportunity, exploring the mechanisms between windows of opportunity, dynamic capabilities, and business model innovation. The research finds that windows of opportunity, dynamic capabilities, and business model innovation are closely interrelated. Windows of opportunity provide enterprises with external development opportunities, dynamic capabilities are the key internal drivers for enterprises to leverage these opportunities, and business model innovation is the effective response and transformation of enterprises to windows of opportunity with the support of dynamic capabilities. The synergistic effects of these three elements jointly drive enterprises to achieve sustainable development in rapidly changing market environments.

Among these, dynamic capabilities underpin the coordination and integration of external resources during shifting windows of opportunity for firms in terms of technology, demand and institutions. There is a dynamic, bidirectional relationship between dynamic capabilities and business model innovation. Dynamic capabilities provide the foundation and momentum for business model innovation, while business model innovation in turn enhances the dynamic capabilities of enterprises, and the two together drive enterprises to realize sustainable competitive advantages in complex environments. This mechanism relationship provides important theoretical and practical insights for enterprises to realize sustainable development in the rapidly changing market environment. Enterprises need to focus on the construction of dynamic capabilities in the digital context, breaking the rigidity and inertia within the enterprise, as a way to accurately identify, seize and utilize windows

of opportunity, transform massive data resources into enterprise knowledge resources, and then realize the development and utilization of digital technology to promote the innovation and optimization of the business model, so as to achieve sustainable development.

Moreover, corporate growth depends not only on seizing market opportunities but more crucially on strategic initiatives led by management. Business executives must effectively identify opportunity windows (by monitoring government policies, shifts in market demand, etc.) and enhance organizational dynamic capabilities to drive business model innovation. Practical approaches include: implementing digital supply chain management (e.g., real-time data sharing) to reduce order response time and mitigate inventory overstock risks; establishing long-term strategic partnerships with key suppliers to leverage economies of scale for cost reduction while minimizing risks from frequent supplier turnover; employing AI-powered demand forecasting to optimize production planning, reducing overproduction waste while balancing operational speed with sustainability; investing in low-carbon production technologies and increasing adoption of sustainable materials like recycled fibers and organic cotton to accelerate green transformation; proactively tracking macro policies such as the EU's Ecodesign for Sustainable Products Regulation (ESPR) to ensure compliance and manage regulatory risks. These strategic practices demonstrate how managerial decision-making transforms external opportunities into sustainable competitive advantages.

The development experiences of SHEIN and ZARA provide valuable insights for other fast-fashion enterprises while offering rich case study materials for academic research on business model innovation. Future research could focus on the following directions: 1. The timeliness and effectiveness of opportunity windows——such as how cross-border e-commerce policy dividends influence corporate development, and how EU carbon tariffs may accelerate sustainable transformation in fast fashion. 2. The micro-foundations of dynamic capabilities - exploring how organizational structure differences between SHEIN's algorithm team and ZARA's designer team lead to distinct innovation pathways. 3. Cross-industry comparisons - conducting comparative analyses between fast fashion and industries like new energy vehicles and consumer electronics to validate the universality of theoretical frameworks. These research avenues would contribute to a more comprehensive understanding of business model innovation mechanisms in different contexts.

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This is to declare that this manuscript is an original work and has not been submitted for publication elsewhere.

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