



Supply Chain Dynamics and Challenges in E-Commerce Live Broadcasting

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Abstract

The e-commerce live broadcast sales model, emerging from the integration of live streaming and online shopping, represents a novel approach to retail. This innovative model allows brands to showcase their products in real-time while engaging directly with consumers through interactive broadcasts. Its dynamic and engaging nature has quickly made it a popular choice in the consumer goods market, attracting both businesses and customers due to its ability to combine entertainment with shopping. As a new and rapidly growing sales format, it is essential to conduct an in-depth analysis of the e-commerce live broadcast sales model to understand the principles underlying its emergence and development. Such an analysis will help identify the factors driving its success, the trends shaping its evolution, and the challenges it faces. By thoroughly examining its operational framework, market impact, and consumer behavior dynamics, we can uncover potential problems in its growth trajectory and develop strategies to address these issues effectively. This will ensure the model's sustainable development and maximize its benefits for businesses and consumers alike. This article focuses on analyzing the fundamental structure and internal dynamics of the e-commerce live broadcast sales model through the lens of the supply chain. By examining how various elements of the supply chain interact and contribute to the success of this innovative sales model, the study aims to uncover its operational mechanisms and key drivers. Additionally, the article addresses existing challenges in the model's development and offers targeted recommendations to overcome these issues, ensuring its sustainable growth and effectiveness in the evolving market landscape.

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1. INTRODUCTION

In recent years, the increasing cost of traditional e-commerce traffic acquisition and the persistently low Gross Merchandise Value conversion rates have posed significant challenges for businesses operating in the digital retail space. These challenges have paved the way for the rise of the "e-commerce + live broadcast" model, which has gained immense popularity due to its unique combination of low costs, minimal barriers to entry, and remarkably high conversion rates. This model has emerged as a powerful new growth point for the e-commerce industry, transforming the way businesses interact with consumers and sell products online. The "e-commerce + live broadcast" model leverages real-time engagement through live streaming to create an immersive and interactive shopping experience. Unlike traditional e-commerce platforms, which often rely on static images and descriptions, live broadcasts allow businesses to demonstrate products in real-time, respond instantly to customer questions, and create a sense of urgency through limited-time offers or exclusive deals. These elements not only enhance consumer trust but also significantly increase the likelihood of immediate purchases, driving higher conversion rates compared to traditional e-commerce methods.

This model has also democratized access to the e-commerce market by lowering the financial and technical barriers for businesses, especially small and medium-sized enterprises (Roozbeh & Raza, 2021; Kumar, 2021; Sun & Wernar, 2021; Owusu & Novignon, 2021). With basic tools such as a smartphone and a reliable internet connection, businesses can connect directly with their target audience, bypassing the need for expensive marketing campaigns or intermediaries. Additionally, the interactive nature of live commerce fosters a stronger emotional connection between the seller and the buyer, creating a loyal customer base that is more likely to make repeat purchases. Moreover, the "e-commerce + live broadcast" approach has proven to be a dynamic response to changing consumer preferences, particularly among younger generations who favor engaging and personalized shopping experiences. Platforms such as TikTok, Instagram, and dedicated live commerce platforms have capitalized on this trend, integrating live shopping features that cater to the growing demand for entertainment-driven retail experiences. This innovative sales model has not only revitalized the e-commerce industry but also opened new opportunities for collaboration between influencers, content creators, and brands. Influencers, in particular, play a crucial role in driving traffic and boosting sales by leveraging their established follower base and credibility. This synergy has further contributed to the rapid adoption and success of the "e-commerce + live broadcast" model across various sectors, including fashion, beauty, electronics, and even food products.

As the e-commerce industry continues to evolve, the "e-commerce + live broadcast" model represents a significant shift toward more interactive, customer-centric retailing. Businesses that adopt this approach stand to gain a competitive edge by tapping into the potential of real-time engagement, enhanced trust, and cost-effective operations. However, as

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competition intensifies, companies must continue to innovate and address challenges such as maintaining content quality, ensuring product authenticity, and building long-term customer relationships to sustain growth in this fast-paced market. In 2020, amid the ongoing impact of the "stay-at-home economy" caused by the COVID-19 pandemic, live broadcasting for e-commerce emerged as a crucial tool for promoting economic recovery. As consumers adapted to new consumption habits driven by lockdowns and social distancing measures, live commerce provided a dynamic and engaging way to connect businesses with their audiences. The model quickly gained traction as an innovative solution to bridge the gap between sellers and buyers during a period of restricted physical interaction. A wide range of participants entered the live commerce market during this time, including platforms, businesses, and individuals from diverse backgrounds. Both online and offline retailers began leveraging live broadcasts to showcase their products, while social media platforms integrated live shopping features to facilitate seamless transactions (Chavula, 2022). High-profile celebrities and social media influencers joined the trend, using their popularity to attract large audiences and drive sales. At the same time, ordinary individuals and smaller businesses also found opportunities to thrive, utilizing the low entry barriers of live broadcasting to establish their presence and reach potential customers (Salleh & Sapengin, 2023; Zaim, 2023; Senbeta, 2023; Kongmanila, 2023). This convergence of players created a wave of live broadcasting activity that reshaped the retail landscape. The interactive format allowed consumers to engage with hosts, ask questions, and view product demonstrations in real time, creating a shopping experience that combined convenience with personalized service. The format's ability to generate immediate conversions through limited-time offers and exclusive deals further cemented its role as a key driver of economic activity. As a result, live commerce not only contributed to mitigating the economic challenges posed by the pandemic but also set the stage for a longer-term transformation in consumer behavior and retail strategies. The surge in live broadcasting for e-commerce demonstrated its potential as a powerful tool for businesses to adapt to changing market dynamics, fostering resilience and innovation in a time of unprecedented challenges. This wave of live commerce has since continued to evolve, becoming a staple of the modern e-commerce ecosystem.

Live broadcasting has emerged as a powerful engine driving the development of e-commerce, infusing the industry with fresh momentum and reshaping its growth trajectory. The phenomenon of "live broadcasting with goods" has quickly evolved into a ground breaking innovation, fundamentally transforming how products are marketed and sold online. This model has not only captivated consumers but also established itself as one of the most promising and predictable growth areas within the e-commerce sector (Rath, 2024; Xiong, 2024). The monetization of live broadcasting in e-commerce represents a pivotal shift, enabling businesses to achieve higher conversion rates and greater customer engagement. By integrating real-time interaction, product demonstrations, and exclusive offers, live broadcasting offers a dynamic shopping experience that resonates with modern consumers. This interactive approach fosters trust, builds stronger connections between brands and customers, and drives immediate purchasing decisions, positioning live commerce as a critical component of e-commerce growth strategies. With the advent of the 5G era, the capabilities of live broadcasting are set to expand even further. The enhanced speed, reduced latency, and improved connectivity of 5G technology will enable smoother and more immersive live streaming experiences, making live broadcasts an essential tool for retailers. As 5G becomes more widespread, live broadcasting is likely to become a standard feature for businesses, providing them with the tools to engage audiences in innovative ways, from high-definition product showcases to augmented reality integrations. This evolution underscores the transformative potential of live broadcasting in the e-commerce industry. It not only opens new avenues for growth but also sets a precedent for how businesses can adapt to technological advancements and changing consumer preferences. As live broadcasting continues to evolve, it is poised to remain a cornerstone of modern retail, driving innovation and creating new opportunities for businesses to thrive in an increasingly competitive marketplace.

2. THE RISE AND DEVELOPMENT OF LIVE-STREAMING WITH GOODS

Live-streaming with goods represents a fusion of e-commerce sales, emerging communication technologies such as live streaming, and the growing influence of the net popularity economy or even the celebrity economy. This phenomenon is the result of economic development, innovative business models, and the rise of self-media platforms, marking a new chapter in the evolution of digital commerce. When platforms like YouTube first appeared, their primary function was for users to share personal content, and there was no established profit model. However, YouTube capitalized on its growing popularity by creating partnerships akin to the "Netflix economy." This involved linking with content creators and inserting advertisements into their videos, with ad revenues shared between the platform and creators. This approach not only provided a sustainable profit model but also highlighted the commercial potential of the net popularity economy. Recognizing this shift, net popularity companies began to emerge. These companies formalized the content creation ecosystem by contracting with web celebrities and social media platforms to leverage the collective strength of a team. This approach addressed the limitations of individual content creators, enabling more precise targeting of users, higher-quality video production, and strategic marketing efforts to attract and sustain traffic.

By streamlining the creative and promotional processes, these companies enhanced the reach and effectiveness of content, transforming live streaming from a casual communication tool into a highly profitable commercial strategy. The integration of live streaming with e-commerce has further elevated this model, allowing businesses to engage directly with consumers in real time, showcase products, and drive immediate purchases. This development signifies the maturation of the self-media landscape, where content creators, platforms, and commercial entities collaborate to create a thriving ecosystem. The combination of technology, creativity, and business acumen has turned live-streaming with goods into a cornerstone of modern digital commerce, with vast potential for growth and innovation. Major social media platforms, including Instagram and YouTube, have launched live broadcast features to address the delays associated with

traditional text and video content by enabling real-time sharing and interaction. This innovation has been warmly received by users, as it allows for instant feedback and engagement. As live streaming has evolved, its content categories have diversified, encompassing niches such as eating shows, music performances, and beauty tutorials, each developing its unique appeal. This rapid growth has not gone unnoticed by platforms, advertisers, and web-celebrity companies, which have moved quickly to capitalize on the opportunity. Web-celebrities, or influencers, leverage live streaming to market and recommend products explicitly or implicitly. These broadcasts drive ordinary users to make purchases, generating revenue that is then shared among platforms, advertisers, companies, and influencers. Over time, this dynamic has transformed live streaming, especially influencer-driven live streaming, into a thriving industry. The rapid expansion of live streaming in China is closely tied to the country's booming e-commerce sector, widespread online shopping habits, and advanced mobile payment systems. Although China's new online marketing approaches emerged later than those in other countries, they have grown at an extraordinary pace. After more than a decade of development, China's live-streaming market has surpassed foreign markets in terms of segmentation and revenue generation. Unlike the relatively narrow focus of many foreign platforms, China's approach to maximizing the potential of live streaming has been comprehensive. Social platforms like Weibo, professional live-streaming platforms like YiZhibo, and e-commerce giants like Taobao have all integrated live-streaming features, enabling the rise of full-time professional anchors who bring increasing specialization to the field. The "live broadcasting with goods" model can be described as a synergy between influencer live streams and brand partnerships. This model functions as a "live bridge with marketing performance," where live advertising directly facilitates transactions. Its key advantage lies in the combination of real-time interactivity and the volume-driven nature of e-commerce platforms. Compared to social platforms and dedicated live-streaming services, e-commerce platforms hold a competitive edge due to their seamless integration of live broadcasting with product sales. This makes them uniquely effective in driving direct transactions, establishing e-commerce live streaming as a dominant force in the market. The strength of e-commerce live streaming peaked in 2021, attracting a growing number of consumers willing to pay for live-streamed content and products. However, the future trajectory of this model remains uncertain. As consumer preferences and market dynamics evolve, the continued success of e-commerce live streaming will likely depend on its ability to innovate, address emerging challenges, and sustain user engagement in an increasingly competitive landscape.

3. THE ESSENCE OF LIVE E-COMMERCE

Live e-commerce refers to a sales model where merchants utilize live broadcasts to recommend products to viewers, stimulate their purchasing desire, and ultimately complete transactions through e-commerce platforms. In this process, the anchor plays a role similar to an offline "shopping guide," where their personal ability to persuade and engage significantly impacts the sales outcome. Essentially, it transforms the traditional offline shopping guide into an online experience, leveraging live media and e-commerce channels to meet consumer needs by fostering trust and a personalized connection. This model is considered an advanced iteration of content-driven e-commerce and represents the latest evolution in the field. It combines the elements of "live + shared experience + interactivity," offering a multi-dimensional upgrade to content-based sales. Live e-commerce fosters deeper interaction with users, enabling the establishment of lasting trust, which is critical for building brand value. Through this closer interaction, brands can effectively communicate their value proposition and achieve a balance between quality and efficiency. Live e-commerce creates a "human aggregation" environment that integrates the value-driven approach of platforms like "Worth Buying" with the affordability-focused model of "Poundland." This combination establishes a new e-commerce ecosystem characterized by high efficiency and cost-effectiveness. It redefines the relationship between people, goods, and platforms, facilitating a win-win scenario for merchants, platforms, anchors, and users alike. Compared to traditional e-commerce, which relies on static images and text descriptions to showcase products, live e-commerce offers a more dynamic and immersive experience through live video presentations. Anchors provide real-time, comprehensive product demonstrations, coupled with engaging commentary and explanations. This format enriches content, enhances interactivity, and achieves higher conversion rates. Live e-commerce thus represents a transformative step forward, offering users a more engaging and trustworthy shopping experience while driving efficiency and profitability for all stakeholders involved.

4. CHARACTERISTICS OF LIVE E-COMMERCE SALES MODEL

E-commerce live broadcast anchors and their teams act as vital intermediaries, connecting fans, viewers, consumers, and brands. Anchors are tasked with negotiating lower prices from brands to attract consumers with competitive deals, while simultaneously delivering engaging, watchable, and interactive content that fosters trust and builds connections with their audience. This dual role is crucial in stimulating consumers' desire to purchase, ultimately driving higher sales, monetizing traffic, and maximizing revenue for brands. Many brands seek opportunities to feature their products in the live-streaming sessions of well-known anchors like "Li Jiaqi" and "Weiya" to capitalize on their influence and boost sales. However, the vast majority of anchors remain relatively obscure, attracting limited audiences and struggling to secure brand partnerships. Only a select few manage to thrive in the competitive live-streaming landscape, building strong teams and becoming highly sought-after by brands. This dynamic illustrates the mutual dependence between anchors and the live-streaming e-commerce model, where each party's success reinforces the other, creating one of the most intriguing consumer phenomena in recent years.

A unique aspect of live e-commerce is the seamless transition of viewers into consumers. Equipped with just a mobile device and internet connection, viewers can watch live broadcasts, interact with anchors, and make real-time purchases of showcased products. This overlap between viewing and buying enhances the interactivity of the experience,

transforming passive observers into active participants who contribute directly to the commercial outcomes of live streams. Viewers not only enjoy discounted prices during live broadcasts but also satisfy their need for fresh, engaging, and entertaining content. The relatable and genuine personas of anchors, combined with their candid product reviews and high-energy presentations, create a sense of trust and connection with the audience. This trust often translates into purchasing behavior, repeated transactions, and consumer loyalty, making live e-commerce both a shopping platform and a form of leisurely entertainment. In the context of traditional supply chain models, inefficiencies such as poor coordination between suppliers, distributors, and customers often lead to delayed capital turnover and operational challenges. E-commerce live sales have addressed these challenges by transitioning from a physical business model to a virtual one, integrating online strategies into supply chain operations. This transformation combines online and offline supply chain models, creating a complete industrial chain that connects suppliers upstream with consumers downstream through robust internet-based platforms. The resulting online-to-offline (O2O) model enhances resource utilization, productivity, and operational efficiency while enabling businesses to align with the online shopping habits of modern consumers. The integration of supply chain processes with live e-commerce platforms has driven significant advancements in resource management, logistics monitoring, and capital flow efficiency. These developments allow businesses to respond quickly to market demands and adapt to evolving consumer expectations, fostering a collaborative and streamlined approach. E-commerce live sales have not only improved operational efficiency but also propelled businesses into a digital-first era, redefining traditional practices and establishing a new standard for economic growth in the digital marketplace.

5. INDUSTRIAL ECOLOGY OF LIVE E-COMMERCE

The live e-commerce industry chain consists of three primary components: the supply side, the platform side, and the consumer side. The supply side includes commodity suppliers such as manufacturers, brands, and distributors, as well as content creators like anchors and Multi-Channel Networks (MCNs). The platform side comprises e-commerce platforms such as Taobao, JD.com, Mogujie, and Racer E-commerce, as well as live streaming platforms like Taobao Live, Jitterbug, and Racer. Within this chain, brands and manufacturers collaborate with e-commerce platforms to provide goods, engage with MCN agencies or anchors to plan live content strategies, and utilize live streaming platforms for content delivery. This process guides consumers toward e-commerce platforms to complete transactions, creating a closed-loop ecosystem that connects merchants, platforms, and consumers while facilitating cash flow and industrial sustainability. In this ecosystem, merchants, platforms, MCN agencies, and anchors share profits based on turnover. Merchants have two primary ways to engage in live broadcasting: through master anchors or self-broadcasting. Master anchors leverage their dedicated fan base, strong content production capabilities, and trusted reputations to deliver diverse and engaging brand promotions. On the other hand, merchant self-broadcasting relies on the brand's own store traffic and loyal customer base, attracting users who follow the brand for updates and new products.

The revenue-sharing model for master anchors typically involves a combination of commissions and "pit fees." Commissions are calculated based on CPS (Cost per Sales) and are divided among the live platform, third-party cooperative platforms, MCN agencies, and anchors. The exact allocation varies by platform. For instance, on Taobao, in non-cooperative scenarios, 30% of the commission (equivalent to 6% of GMV) is allocated to Ali Mama and Ali Creation Platform, while the remaining 70% is distributed among MCN agencies and anchors. In cooperative scenarios with platforms like Jitterbug or Racer, Taobao retains 7.4% of GMV as a content and technical service fee, with the remainder going to the cooperating platform and MCN agencies/anchors. Pit fees are another key element of the master anchor model. These fees represent the cost of featuring goods in live broadcasts and are influenced by factors such as the anchor's influence, product category, and shelf time. Leading anchors with greater influence command higher pit fees, which often rise during major promotional events like "Double Eleven." Some pit fees are linked directly to ROI (Return on Investment), meaning anchors only receive these fees if they meet specified performance thresholds. In the merchant self-broadcasting model, the primary costs include labor for live teams, live room setup and decoration, and marketing expenses. After deducting platform technical support fees, most of the remaining GMV is retained by the merchant. Some merchants also outsource live streaming operations to professional agencies, incurring service fees that form part of their live broadcasting costs. These costs are typically calculated based on the duration of live streaming, with variations depending on the operating agency. This multi-layered ecosystem highlights the complexity and flexibility of the live e-commerce model, where different stakeholders contribute to and benefit from the industry's growth. It reflects a highly collaborative framework, driving efficiency and innovation across the supply chain while aligning with the needs of merchants, consumers, and platforms.

6. KEY PLAYERS OF LIVE E-COMMERCE

The live e-commerce industry ecosystem is composed of three main platform types: traditional e-commerce platforms like Taobao, entertainment content platforms like Tiktok, and shopping guide community platforms like Mogujie. Each of these platforms has its unique logic and focus for integrating live e-commerce into its operations. Traditional e-commerce platforms use live broadcasting to expand customer acquisition channels, maintain user stickiness, and harvest traffic efficiently. Entertainment content platforms, with their abundant traffic resources, enter the e-commerce space as an exploration to monetize their vast audience through live streaming. Meanwhile, shopping guide community platforms leverage their inherent consumer interaction advantages to consolidate e-commerce operations by using live broadcasts to enhance engagement and drive transactions. The distinct operational approaches of these platforms result in varying marketing effects, seen in differences in GMV (Gross Merchandise Value) and fan value (measured as GMV per fan per

session). Taobao, as a traditional e-commerce platform, achieves high GMV and fan value, driven by its fan base's strong purchasing intent and high conversion rates. Tiktok, representing entertainment content platforms, generates medium GMV but struggles with low fan value due to weaker emotional connections between entertainment-driven fans and anchors. In contrast, Mogujie, a shopping guide community platform, has lower GMV but excels in fan value, as its closely-knit community fosters strong trust and high purchasing intent among fans.

MCN (Multi-Channel Network) organizations play a pivotal intermediary role in the live e-commerce industry. Originally conceived to link YouTube with professional content creators, MCNs in China have evolved significantly. Their expanded functions include content creation, traffic generation, exposure, and commercialization. In live e-commerce, MCNs manage the lifecycle of anchors, providing professional content support, resource matching, and monetization strategies. By integrating upstream and downstream operations, MCNs create a closed-loop system that drives the entire e-commerce industry chain. For example, they incubate web celebrities, develop fan bases, enhance content promotion, and optimize merchandise combinations to attract star anchors who use their popularity to amplify sales. E-commerce-focused MCNs, such as Qianxun and MeiONE, stand out for their ability to integrate traffic, operations, supply chain management, and e-commerce solutions effectively. These organizations leverage their resources and bargaining power to maximize commercial potential for their partnered influencers, contributing significantly to their revenue. Approximately 70.5% of the content e-commerce market revenue is dominated by top-tier MCNs, demonstrating their critical role in driving traffic and enabling accurate content targeting. In the live e-commerce landscape, anchors act as crucial intermediaries, creating direct links between products, consumers, merchants, and platforms. By describing and showcasing products in detail, they shorten the path from product to consumer, facilitating immediate and informed purchases. The growing diversity of anchors includes celebrity influencers, internet-famous personalities, virtual idols, and merchant-owned anchors. Each type serves different purposes, with celebrity and high-profile anchors driving traffic and exposure for new product launches, while lower-cost mid-tier and merchant anchors handle daily marketing and promotion needs efficiently. This dynamic ecosystem has enabled live e-commerce to evolve into a significant economic force. It bridges the gap between entertainment, social interaction, and commerce, creating a vibrant and integrated market model that caters to a wide range of consumer preferences and business needs. As China's live e-commerce sector continues to mature, these elements collectively ensure its sustained growth and influence in the digital economy.

7. THE BASIC FORM OF E-COMMERCE LIVE BROADCAST MODE FROM THE PERSPECTIVE OF SUPPLY CHAIN

The sales end is the primary realization point of the e-commerce live broadcast sales model, where online celebrity anchors promote products through live broadcasts on e-commerce platforms. This sales model has several distinct characteristics: first, it provides an on-site, intuitive, and comprehensive presentation of the product; second, it capitalizes on the flow effect and opinion leader influence of the Internet celebrity anchors; and third, it integrates real-time network interaction during the sales process. Anchors play a critical role in bridging the gap between products and consumers by effectively using their fan base and communication skills to drive purchasing behavior (Chai, 2021). The supply side in this model primarily involves product manufacturers. These manufacturers benefit from direct communication with consumers through the anchor, bypassing traditional intermediaries like secondary distributors and agents, thus reducing costs and improving efficiency. This direct connection also requires manufacturers to adapt their production to market demand and the preferences conveyed by live broadcasters, fostering a dynamic and responsive production process (Jiang, 2020). In this sense, the role of live broadcasters extends beyond promotion to influence product design and development, ensuring alignment with consumer needs (Li, 2021). Consumers in this model tend to gather in the live broadcast rooms of popular anchors, experiencing a unified promotion of products. Anchors significantly influence the purchasing behavior of their audience, as viewers' decisions are shaped by the content and presentation style of the live broadcast (Tang, 2020). Research indicates that the majority of consumers engaging with this model are women from third- and fourth-tier cities, particularly from the "post-90s" and "post-00s" generations. This indicates a relatively stable and targeted consumer base for e-commerce live broadcasts (Tang, 2020). The product end of this model is characterized by lower prices and faster product updates. Lower prices stem from the direct connection between producers and consumers, reducing intermediary costs. Anchors leverage their vast fan base and bargaining power to negotiate better deals with producers, enabling significant price concessions for consumers. For instance, Taobao's well-known anchor "Weiya" has demonstrated how effective strategies such as exclusive vouchers, discounts, and time-limited offers can reduce product prices to nearly half of their regular price. These strategies not only enhance consumer satisfaction but also boost business sales, creating a win-win scenario (Jia & Zhang, 2020). Additionally, to meet the diverse and personalized demands of consumers, live broadcasters frequently introduce new products. This necessitates manufacturers to speed up product development and production to keep up with anchors' requirements. For example, a leading Taobao anchor showcases new clothing products daily, necessitating factories to provide samples and adjust production schedules based on live broadcast orders. While this practice increases pressure on factories and supply chains, it also drives advancements in production and supply chain efficiency (Li, 2021; Jiang, 2020). The e-commerce live broadcast sales model revolutionizes traditional supply chain processes by integrating interactive, consumer-driven strategies. It promotes direct communication between manufacturers and consumers, accelerates product updates, and enhances sales efficiency, shaping a dynamic and innovative ecosystem for e-commerce growth.

8. THE INTERNAL LOGIC OF E-COMMERCE LIVE BROADCAST SALES MODEL FROM THE PERSPECTIVE OF SUPPLY CHAIN

The e-commerce live sales model has effectively addressed several key consumer demands, making it a preferred method of shopping in the modern market. First, it caters to consumers' need for lower prices. Compared to traditional e-commerce, live broadcasting reduces product prices by minimizing the intermediaries between producers and consumers and utilizing the bargaining power of network anchors. This model significantly meets consumers' price expectations. For example, in live selling jade on e-commerce platforms, the model eliminates the inflated prices caused by information asymmetry between businesses and consumers. By showcasing jade products at more affordable prices and offering services such as live selection and bargaining, live selling attracts a large number of consumers. This approach also encourages businesses to adopt a small-profit, quick-turnover strategy, promoting a win-win scenario for both consumers and businesses. Secondly, the e-commerce live sales model addresses the growing consumer demand for product brand and quality. Modern shoppers increasingly value product quality and place trust in well-known brands. This model enhances the brand effect in two ways. First, network anchors often ensure product quality by carefully selecting reputable brand products for promotion. Secondly, the anchors themselves develop personal brand effects, with their reputation and popularity symbolizing a product category. For instance, "Li Jiaqi" has become synonymous with lipstick products, demonstrating the powerful brand association created by popular anchors. Consumers often trust the anchor's recommendations more than specific brand names, further solidifying the anchor's influence. Finally, the live sales model resolves the common consumer challenge of product selection. Traditional e-commerce relies on a "people looking for goods" approach, leaving consumers overwhelmed by countless options. Without in-depth product knowledge, consumers often face hesitation and confusion in their choices. Anchors in the live sales model act as opinion leaders, using intuitive product displays and real-time interactions to alleviate this confusion. By providing demonstrations and addressing consumer queries, they stimulate purchase decisions. According to iResearch data, 58% of users prefer live shopping for the intuitive and realistic product displays, 43% appreciate the convenience of purchase links, and 37% are attracted by the competitive pricing. Analysts from iResearch further highlight that the comprehensive product presentation and buyer-seller interaction during live broadcasts effectively address consumer concerns and facilitate purchasing decisions on the spot. This dynamic and consumer-centric approach has made the e-commerce live sales model a powerful tool for modern retail, driving engagement, trust, and sales while meeting the evolving demands of the market.

9. PROBLEMS IN THE DEVELOPMENT OF E-COMMERCE LIVE BROADCASTSALES MODE FROM THE PERSPECTIVE OF SUPPLY CHAIN

The e-commerce live broadcast sales model is currently experiencing rapid growth, with a significant increase in the volume of live broadcasts promoting goods. Numerous online celebrities have embraced this sales model. However, this growth has brought challenges, particularly regarding the quality of the products being sold. Some online celebrities prioritize shipment volume over product quality, leading to alarmingly high return rates, sometimes reaching 50%. This figure starkly contrasts with the return rate of 10% to 15% seen in traditional e-commerce. According to a survey, only 27% of respondents rarely cancel or return orders, while 26% believe that the return and exchange ratio for live broadcast sales is higher than that of standard e-commerce. A key component supporting the Internet celebrity economy and e-commerce live sales is the supply chain. Anchors, as the front-end representatives of sales, must not only focus on their influence and promotional strategies but also actively manage the supply chain that underpins their operations. Unfortunately, many current Internet celebrity anchors lack a fundamental understanding of supply chain management and often replicate traditional e-commerce supply chain practices. This approach fails to meet the unique demands of the live broadcast sales model, resulting in inefficiencies that hinder its sustainable growth. Inadequate supply chain management has become a critical factor limiting the future development of this promising sales approach. While the ability of online celebrity anchors to sell goods through live broadcasting is undoubtedly effective as a marketing channel, it falls short in contributing to brand building. This gap leads to a substantial waste of marketing resources. In an increasingly competitive market, enterprises need not only robust sales figures but also a strong brand image to maintain long-term relevance and consumer trust. However, the lack of focus on brand development and the minimal role anchors play in brand shaping within the supply chain restricts the overall effectiveness of the live marketing model. For the e-commerce live broadcast sales model to thrive, it must address these challenges by prioritizing product quality, strengthening supply chain management, and integrating brand-building strategies. These measures will ensure a balanced approach that combines sales growth with sustainable brand development, fostering trust and loyalty among consumers.

10. SUGGESTIONS FOR THE FUTURE DEVELOPMENT OF E-COMMERCE LIVE BROADCAST SALES MODEL FROM THE PERSPECTIVE OF SUPPLY CHAIN

The core issues of product quality and high return rates in the e-commerce live sales model stem from unclear accountability among supply chain participants. When problems arise, the lack of defined responsibilities leads to insufficient attention to product quality. To address this, relevant authorities must standardize the e-commerce live broadcast model, establishing clear guidelines for all supply chain participants regarding product quality responsibilities. This will ensure that consumers' rights are protected, while incentivizing all parties to maintain high-quality standards. Supply chain management must take a central role in the e-commerce live broadcast sales model as it matures. While creating internet celebrity anchors has become relatively straightforward, effective supply chain management remains a significant challenge. Internet celebrity anchors need to prioritize managing the supply chain behind their operations, potentially by forming professional management teams. Anchors should also enhance their skills and knowledge of supply chain management through continuous learning. Additionally, regulatory bodies must strengthen oversight, offer guidance for supply chain management in the internet celebrity economy, and work to elevate overall supply chain

efficiency in the e-commerce live sales sector.

At its core, live e-commerce is a method of online sales, where the essence lies in product quality and safeguarding consumers' rights and interests. To ensure long-term success, regardless of the sales model, maintaining product quality is paramount. Anchors must be diligent in selecting high-quality products and should avoid compromising on standards for short-term gains, as this risks eroding consumer trust. Self-discipline within the live e-commerce industry is essential for sustainable growth. Industry participants must work to professionalize their operations from within, while regulatory authorities should implement strict supervision and develop detailed regulations for live e-commerce practices. By monitoring live broadcasts and the behaviors of all participants, authorities can enforce compliance with established norms, protect consumer rights, and promote the orderly development of the sector. A combined effort of industry self-regulation and government oversight can help achieve a normalized and healthy growth trajectory for live e-commerce. The low barriers to entry for e-commerce live platforms have led to a surge of practitioners conducting promotional activities, resulting in frequent market disruptions and intensified competition among anchors and platforms. To counteract the issues of homogenized competition, platforms, and anchors should focus on innovating live broadcast models to promote unique and personalized experiences. In product selection, broadcasters should seek collaborations with a wider range of high-quality brands to offer consumers better products and deals. In live broadcast presentations, anchors should create distinctive and engaging live scenarios to captivate audiences. Moreover, in content delivery, anchors must improve their professionalism, providing expert answers to consumer inquiries and tailoring live programs for different products.

Brand building is a critical component for enhancing the competitiveness of enterprises and products, yet e-commerce live sales currently lack this capability. The primary reason lies in the insufficient exploration of consumer needs, resulting in products that fail to fully meet customer expectations. Moving forward, big data technology should be integrated into live broadcasting to better analyze and address consumer preferences. By producing goods that align closely with consumer demands, businesses can enhance product influence within target audiences and strengthen brand development. Big data can also facilitate more precise marketing strategies, enabling anchors to effectively highlight product features during live broadcasts and establish strong brand positioning in consumers' minds. Through a combination of improved accountability, enhanced supply chain management, innovation, and the integration of advanced technologies, the e-commerce live sales model can evolve into a sustainable, consumer-centric, and competitive industry. These measures will ensure that the sector not only meets immediate market demands but also builds a robust foundation for long-term growth and success. The advent of 4G revolutionized the video and live broadcasting industries, paving the way for live e-commerce. Now, the rapid commercialization of 5G, spurred by the "new infrastructure" initiatives, is poised to bring an all-encompassing upgrade to the live e-commerce user experience. The enhanced capabilities of 5G, including faster processing speeds and reduced latency, make advanced technologies such as VR (virtual reality) and AR (augmented reality) practical for widespread use. These developments promise to inject fresh energy into live e-commerce, creating an immersive, interactive, and high-definition shopping experience. With 5G, the era of blurred live broadcasts will become a thing of the past, giving way to ultra-high-definition visuals. Previous limitations in live broadcast equipment and 4G network efficiency often resulted in blurry streams, impairing the detailed presentation of products. The application of 5G technology enables 4K/8K ultra-high-definition live broadcasts, meeting consumers' growing expectations for high-quality visuals and seamless viewing. This advancement will significantly enhance the intuitive and comprehensive display of product details, thereby optimizing the shopping experience. Moreover, 5G's high transmission speed and mobility capabilities will diversify live broadcasting scenarios, enabling broadcasts from virtually anywhere. Enhanced network coverage will allow live streams to extend to remote areas, including points of origin for commodities and manufacturing facilities. This closer connection between production sites and consumers will foster transparency and create new opportunities for transactions by bringing the story behind the products directly to the audience. One of the most transformative aspects of 5G is the integration of VR/AR technologies into live e-commerce, delivering a fully immersive shopping experience. Features such as VR/AR-enhanced live streaming, virtual try-ons, 3D real-time interaction, and 360-degree product displays will redefine how consumers engage with products. These immersive technologies not only make the shopping process more engaging but also offer consumers a realistic sense of the product before purchasing, bridging the gap between in-store and online shopping experiences. The potential of 5G in live e-commerce is immense, enabling innovative applications that enhance consumer satisfaction and drive the industry's evolution. By embracing ultra-high-definition visuals, expanding live broadcast scenarios, and integrating cutting-edge VR/AR technologies, live e-commerce is on the brink of a transformative era, promising unparalleled interactivity and engagement for consumers.

11. CONCLUSION

As an innovative sales model, e-commerce live sales have demonstrated a clear and significant stimulating and driving effect on the consumer goods market. This model seamlessly integrates interactive live broadcasting with e-commerce, creating a dynamic shopping experience that appeals to modern consumers. By combining real-time product demonstrations, direct consumer engagement, and attractive promotional strategies, it has successfully reshaped traditional consumption patterns and revitalized market demand. E-commerce live sales leverage the influence of anchors to bridge the gap between brands and consumers, fostering trust and driving purchase decisions. Anchors' interactive presentations allow consumers to visualize products in use, address questions instantly, and build a sense of connection with the product and the presenter. This immediate and immersive approach enhances consumer confidence, translating to higher conversion rates compared to traditional e-commerce models. Moreover, the live sales model has introduced a

competitive advantage by offering exclusive deals, time-limited discounts, and engaging promotional tactics, which not only attract consumers but also encourage impulsive buying. These strategies tap into consumer psychology, creating a sense of urgency and exclusivity that drives sales volume and boosts market activity. The rapid adoption of this model, particularly in industries like fashion, beauty, and electronics, highlights its ability to cater to diverse consumer needs and preferences. Its effectiveness in reaching untapped markets, such as younger demographics and consumers in tier-three and tier-four cities, underscores its transformative impact on the consumer goods landscape. By offering a personalized, engaging, and value-driven shopping experience, e-commerce live sales continue to redefine how consumers interact with brands, fostering sustained growth in the market. Analyzing the e-commerce live sales model through the lens of supply chain dynamics reveals the internal logic driving its rapid growth and popularity. This model's explosion stems from its ability to streamline the supply chain, reduce intermediaries, and directly connect producers with consumers, thereby enhancing efficiency and reducing costs. Anchors serve as critical intermediaries, bridging the gap between brands and consumers while adding a layer of trust and engagement that traditional sales channels often lack. The model showcases several inherent advantages. First, it shortens the supply chain, reducing logistical complexities and enabling faster product delivery. Second, it incorporates real-time feedback mechanisms, allowing manufacturers to respond swiftly to consumer demands and market trends. Finally, it capitalizes on interactive and immersive technologies to offer an engaging consumer experience, fostering loyalty and repeat business. However, the sustainability of this sales model hinges on addressing its current challenges. Issues such as inconsistent product quality, high return rates, and the lack of comprehensive supply chain management must be systematically resolved. Clear accountability among supply chain participants is essential to maintaining trust and ensuring consumer satisfaction. Additionally, as the model matures, integrating advanced technologies like AI and big data analytics can help optimize inventory management, enhance consumer targeting, and streamline operations further. Recognizing the immense potential of live e-commerce sales, stakeholders should focus on refining its operational framework and regulatory standards. Strengthening industry self-discipline, implementing robust quality controls, and fostering innovation in content and technology will ensure the long-term viability and growth of this transformative sales model. By addressing these challenges proactively, live e-commerce can sustain its trajectory as a dominant force in the consumer goods market.

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