

Vertical AI Agent Operation Strategy with K-Beauty Indie Brands as Customers

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Abstract: K-beauty indie brands are achieving remarkable global growth through innovative products and compelling brand storytelling, yet they face persistent challenges including low brand recognition, limited marketing budgets, and insufficient specialized talent. (1) Background/Purpose: Advances in AI technology—particularly AI creators, AI influencers, and Vertical AI Agents—present transformative opportunities to overcome these structural constraints. This study aims to propose a Vertical AI Agent platform business model and operation strategy specifically tailored to K-beauty indie brands, exploring how AI-based marketing solutions can enhance marketing efficiency, strengthen global competitiveness, and enable late-mover indie brands to become market disruptors. (2) Study Design/Methodology/Approach: The study combines literature review, domestic and international case analysis (AI creator platforms: Synthesia, Hour One, Supertone; AI influencers: Lil Miquela, Lu do Magalu, Luna & Lshi; Vertical AI Agent applications in beauty and other industries), expert interviews, consumer surveys, and analysis of tech-industry reports from Y Combinator, Google, McKinsey, and Deloitte. Strategic planning frameworks including 3C analysis, McKinsey 7S analysis, and Business Model Canvas are applied. (3) Findings: An eight-stage Vertical AI Agent operation strategy is proposed—from AI creator collaboration and K-beauty partnership building through AI influencer development, campaign execution, platform differentiation, SaaS-integrated platform architecture, and revenue diversification—demonstrating that AI agent platforms can significantly boost marketing efficiency and brand competitiveness of K-beauty indie brands. (4) Originality/Value: This study provides a comprehensive roadmap for the implementation of Vertical AI Agent platforms in the K-beauty indie brand context, contributing a novel framework for how emerging AI infrastructure can be strategically leveraged by resource-constrained brands to achieve sustainable global growth.

Keywords: Vertical AI Agent; K-beauty; indie brand; AI influencer; AI creator; marketing strategy; Business Model Canvas; generative AI; platform business; SaaS

1. Introduction

1.1. Research Background

The K-beauty market is a notable sector in the global beauty industry, rapidly growing based on innovative products and unique storytelling (Statista, 2023). In particular, K-beauty indie brands armed with creative ideas and differentiated products are gaining great popularity with domestic and international consumers (Hankyo-rae, 2024). However, most indie brands face difficulties such as low brand recognition, insufficient marketing capital,

and lack of specialized personnel, which act as limits to growth in the competition of the global market (Yuanta Securities, 2024).

Recent advances in AI technology are presenting new possibilities for K-beauty indie brands. AI-based marketing solutions such as AI creators, AI influencers, and Vertical AI Agents can play a pivotal role in increasing the marketing efficiency of indie brands and strengthening global competitiveness. In particular, Vertical AI Agents can autonomously perform marketing tasks without human intervention and provide optimized marketing strategies through data analysis and decision-making, potentially serving as a breakthrough for the growth of indie brands.

This study aims to present a business model and operation strategy for a Vertical AI Agent platform based on AI creators and AI influencers specifically tailored to K-beauty indie brands, and thereby contribute to strengthening the global competitiveness of indie brands and the development of the K-beauty industry. In particular, the K-beauty industry is characterized by rapid trend changes and intense competition, with a market in which first-mover companies have significant influence. In this environment, the study explores the possibility that indie brands as late movers can create new customer value through the innovative technology of Vertical AI Agents and grow into disruptors that change the market landscape.

1.2. Research Objectives

This study is conducted with the following objectives. It clearly defines the concepts of AI creators and AI influencers, and the concept of a Vertical AI Agent platform that combines AI technology with a platform business model. It presents a business model for a Vertical AI Agent platform that considers the characteristics and needs of K-beauty indie brands, and presents profit generation strategies and sustainable growth models.

As phased strategies for stable operation and growth of the platform, it presents initial market entry strategies, growth strategies, and competitiveness enhancement strategies, and derives the key success factors of the Vertical AI Agent platform. Through the research results, it supports the strengthening of indie brand competitiveness and global market entry, ultimately contributing to the development of the K-beauty industry. Using Vertical AI Agent technology, it verifies the possibility that K-beauty indie brands, as late movers, can create new customer value and grow into disruptors that destroy existing market order, and presents specific strategies to this end.

1.3. Research Methodology

This study conducts objective and in-depth analysis through various research methods. It analyzes literature related to AI creators, AI influencers, AI agents, platform business models, the K-beauty market, and digital transformation to understand the theoretical background and industry trends. Academic papers, market research reports, government and institutional publications, industry trend reports, and professional media articles are broadly referenced.

Domestic and foreign successful cases of AI influencer marketing and digital transformation success cases of K-beauty companies are analyzed, and strategies applicable to indie brands are derived. Cases of AI influencer marketing such as Lil Miquela, Lu do Magalu, and Innisfree “Sua,” and digital transformation cases of K-beauty companies are analyzed in depth.

Experts in various fields including AI technology experts, K-beauty marketing experts, indie brand officials, and venture capital investors are interviewed to collect practical opinions and information. A survey is conducted targeting K-beauty consumers to understand awareness and preferences regarding AI influencers, and to analyze requirements for AI creator and platform services.

The prospects of tech companies and venture capital (VC) for AI agent business models are analyzed and strategies appropriate for K-beauty indie brands are established. Reports and market analysis materials from professional institutions such as Deloitte, Moody's, and Y Combinator are referenced, and investment trends and success cases for AI agent business models are analyzed.

2. Literature Review and Environment Analysis

2.1. Current Status of the AI Creator Market

The AI creator market is growing rapidly and is expected to reach a scale of USD 1 billion by 2025 (Statista, 2023). In the past, AI creators performed functions such as realistic appearance realization, diverse content creation, advancement of natural language processing technology, and personalized service provision (Korea Communications Agency KCA, 2023).

Currently, technologies that realize more sophisticated appearances and natural movements, real-time interaction, and voice synthesis technology have developed. With these technological advances, AI creators are being utilized in various fields including entertainment, education, and marketing, with virtual influencers, virtual YouTubers, AI announcers, and AI tutors appearing and actively working (AI Korea Community Newsletter, 2024).

The AI creator market is expected to expand further (Statista, 2023). Along with advances in AI technology, AI creators are developing more human-like appearances and emotion expression and interaction capabilities similar to humans, providing personalized content creation and services. AI creators play an important role in virtual worlds like the metaverse, providing various services that merge the real world with the virtual world (Korea Creative Content Agency, 2023).

2.2. Current Status of the AI Influencer Market

AI influencers are virtual characters created based on artificial intelligence technology that act like real influencers on social media, creating content and communicating with fans (Korea Creative Content Agency, 2023). Initially regarded as novel entities, they have now formed a rapidly growing market, performing roles as advertising models, entertainers, and even social activists.

Past AI Influencer Market

In 2016, Lil Miquela (@lilmiquela) was one of the first virtual influencers to start activities on Instagram, quickly gaining popularity and showing the potential of the AI influencer market (Lee Ji-eun, 2024). Following Lil Miquela's success, AI influencers appeared in various fields including fashion, beauty, and music. In Korea, the first virtual influencer 'Rozy' appeared in 2020, and the AI influencer market began in earnest. Early AI influencers attempted differentiation from real influencers through distinctive appearances, personalities, and storytelling.

Lil Miquela drew public attention through her setting as a Brazilian-American mixed heritage and music activities, while Rozy attracted attention through an appearance and lifestyle reflecting MZ generation tastes (Lee Ji-eun, 2024). AI influencers actively communicated with fans through social media to form intimacy. They communicated in ways similar to real influencers, such as responding to comments and conducting live broadcasts answering fan questions. They also participated in marketing activities through collaboration with various brands, including advertising model roles and collaborative product launches.

Current AI Influencer Market

AI influencers are now active in various fields beyond traditional fashion, beauty, and entertainment, including games, finance, and education. The AI influencer market is growing rapidly, expected to grow from approximately USD 5 billion in 2023 to USD 25 billion in 2028 (Statista, 2023).

With advances in AI technology, AI influencers' appearances, voices, and movements have become more natural, and real-time communication with customers has become possible through the development of natural language processing technology (KCA Korea Communications Agency, 2023). AI influencers show appearances and behaviors so natural that they are difficult to distinguish from real people, which increases fan immersion and enables more effective marketing. They also form empathy with fans through storytelling that has their own story and worldview rather than simply being good-looking entities. They build authentic trust relationships by communicating and empathizing sincerely with fans. Brands utilizing AI influencers are striving to ensure that AI influencers have a positive social impact (Korea Creative Content Agency, 2023).

2.3. Current Status of the K-Beauty Market and Indie Brand Market

The K-beauty industry has been rapidly growing in recent years, leading major trends in the global beauty market, with particularly notable advances by K-beauty indie brands armed with original brand stories and innovative products. The K-beauty market size is expected to grow from USD 13.5 billion in 2022 to USD 21.6 billion in 2027 (Statista, 2023).

K-Beauty Market Status

This growth stems from the following key trends. Increased interest in the environment and animal welfare has made clean beauty and vegan beauty products using eco-friendly ingredients and packaging popular. The personalized cosmetics market tailored to individual skin types and preferences is expanding, with AI technology-based skin diagnosis and product recommendation services being introduced. With the growth of the e-commerce market, online sales channels have established themselves as the main distribution route in the K-beauty market, with various online sales strategies such as live commerce and social media marketing being utilized. The MZ generation is emerging as the main consumer group of K-beauty, valuing conscious consumption, fun, and experience while being accustomed to obtaining information and making purchases through online platforms.

K-Beauty Indie Brand Market Status

K-beauty indie brands have characteristics that differentiate them from large corporation brands. Indie brands operate on a small-to-medium scale and make independent decisions free from large corporations' capital or influence. They form emotional connections with consumers through storytelling that contains the brand founder's philosophy, values, and experiences. They develop differentiated products with new ingredients, technologies, and designs to target niche markets. They actively utilize online sales channels to reduce distribution costs and reach consumers directly. They respond nimbly to market trend changes, launching new products and modifying marketing strategies. They communicate closely with customers through social media and online communities and reflect customer feedback.

K-beauty indie brands face various competitive factors, including competing with large corporation brands that have enormous capital and brand recognition. Global beauty brands are entering the K-beauty market, intensifying competition. Overseas brands try to secure competitive advantages with high brand recognition and diverse product lineups. The market competition is intensifying due to the emergence of new indie brands and growth of existing ones. Products imitating the innovative products of indie brands are quickly launched, weakening market competitiveness. Protection of intellectual property rights and development of differentiation strategies are becoming important.

K-beauty indie brands have growth potential based on the following factors: increasing consumers who prefer original products that can express individuality over standardized products; the continuous growth of online sales channels providing new opportunities; and the Korean government implementing various support policies for the growth of SMEs and indie brands. However, to continue sustainable growth, indie brands must overcome challenges such as low brand recognition, limited marketing budgets, and difficulties in securing offline distribution channels.

2.4. Current Status of the Generative AI Industry

Generative AI Industry Investment Status

Currently in the generative AI market, investment is concentrated in hardware, cloud, and foundational models. However, it is forecast that greater value creation will occur in the future in application, service, and MLOps areas, with software companies expected to advance as in the dot-com bubble era. Among major company trends, Palantir provides an AI-based data analysis platform and recorded a high stock price increase of 281% this year. AppLovin provides an AI-based mobile advertising platform and shows high growth.

Six Layers of the Generative AI Industry

Analyzing the generative AI industry as a value chain with six layers—hardware, cloud, foundational models, MLOps, applications, and services: Hardware provides GPUs, CPUs, memory, and other hardware needed for AI model training and execution. Cloud provides cloud computing services for AI model development and deployment. Foundational models provide base models trained on various data including text, images, and voice.

MLOps provides tools and platforms for machine learning model development and operation. Applications develop AI applications specialized for specific tasks or industries. Services provide enterprise-customized AI consulting and AI transformation services. Meta and Google are improving profitability through AI-based advertising optimization. Visa has deployed over 500 generative AI applications and is proactive in adopting AI technology.

AI Agent Status in the Generative AI Industry

With the expansion of AI service sectors and rapid increase in demand for enterprise-customized AI services, traditional IT service companies like IBM and HPE are expanding AI consulting businesses. Consulting companies such as Accenture and Globant are also strengthening AI transformation services, and the trend of developing AI solutions specialized by industry is accelerating. Next-generation AI agents like personal AI assistants Siri and Alexa are becoming more sophisticated, and enterprise AI agents like Salesforce's Agentforce and ServiceNow's Assist are evolving into business automation and productivity enhancement tools. These AI agents are developing in the direction of enhancing personalized interaction and decision-making support functions.

Implications of the Generative AI Industry

In the short term, investment in hardware companies such as NVIDIA and AMD is attracting attention, but in the medium to long term, infrastructure/software companies such as Broadcom and Palantir are expected to emerge. In the long term, investment focus is forecast to shift to AI agents and service companies. The phenomenon of the software ETF (IGV) rise exceeding the semiconductor ETF (SOXX) suggests this trend change and shows that the AI industry is entering the actual utilization and service stage beyond the infrastructure construction stage.

Generative AI is changing the paradigm of the IT industry and creating new opportunities across the value chain. In particular, the growth potential of the MLOps, application, and service areas provides important implications for AI creator and platform businesses. AI technology will advance further and be applied in various fields, making the role of the upper part of the value chain increasingly important.

2.5. Current Status of the Vertical AI Agent Market

The current status and future prospects of the Vertical AI Agent market are analyzed in depth. In particular, there are predictions that AI Agents will replace SaaS and the market size will grow more than 10 times (Y Combinator). In response to these changes, the changes in business models of AI creator and Vertical AI Agent platforms and corporate response strategies are presented. The relationship with Google's '5 Ways AI Will Shape Businesses in 2025' is also analyzed, along with the changing competitive environment of the Vertical AI Agent market and the resulting opportunities and challenges (Google, 2025).

5 Ways AI Will Shape Businesses

According to Google's '5 Ways AI Will Shape Businesses in 2025,' multimodal AI, AI agents, enterprise search systems, AI-based customer experience, and AI security systems were presented as major change factors. This is closely related to the views of YC leadership. Google forecasts that AI agents will provide consistent experiences from customer response to internal processes and can provide consistent customer service across various channels. This aligns with the prediction of YC leadership that AI agents will replace SaaS and expand the market.

Transition to On-Device LLM

YC leadership predicts that the shift to on-device LLM will bring about rapid changes, with Vertical AI Agents replacing SaaS, initially replacing Vertical SaaS, but when on-device LLM becomes possible, it will become a completely different business model from traditional SaaS. Specifically, the following changes are predicted: with rapid AI technology advances every three months, an era of vertical AI agents that can completely replace entire teams and functions within companies arrives; the OpenAI monopoly system transitions to a competitive system with various companies including Claude, achieving market diversification; competition intensification accelerates technology innovation and greatly expands consumer choice; startup market entry barriers lower and the entrepreneurial ecosystem activates; AI agent actual implementation cases increase and market credibility

risers; and companies' AI adoption speed accelerates and market size rapidly grows (Y Combinator, 2024).

Vertical AI Agent Application Fields

Vertical AI Agents are already being utilized in various fields and the scope is rapidly expanding. In the customer service field, they perform 24-hour automatic responses, problem resolution support, and customized service provision through chatbots and virtual assistants. In marketing and sales, they automate prospective customer discovery, information collection, customized advertising delivery, campaign performance analysis, and price negotiation. In finance, they are utilized for credit evaluation, loan screening, risk prediction and management, and financial fraud prevention. In healthcare, they support medical image data analysis, personalized treatment provision, and new drug development. In manufacturing and logistics, they automate production line control, quality management, demand forecasting, inventory optimization, and delivery route optimization. In education, they improve learning effectiveness by understanding learning progress and providing personalized learning content. In law, they support lawyers' work through legal document review and case analysis. In art and creativity, they support creation of artistic works in music, art, literature, and other fields.

The Vertical AI Agent market is rapidly growing and providing new opportunities for companies, including work efficiency improvement through business process automation, decision-making support through data analysis and prediction, customer experience personalization through customized services, and creation of new business models utilizing AI agents.

Vertical AI Agent Challenges and Prospects

The Vertical AI Agent market faces challenges including data quality management (AI agents depend heavily on the quality of training data, and biased data can lead to incorrect results), security and privacy protection of data processed by AI agents, clear accountability for AI agent errors or incorrect judgments, and consideration of ethical issues that may arise in the development and utilization of AI agents.

To respond to changes in the competitive environment of the Vertical AI Agent market, companies must establish strategies such as securing competitive advantage through continuous innovation and differentiation, strengthening platform competitiveness focusing on long-term customer value creation rather than short-term revenue, nurturing and collaborating with Vertical AI Agent startups to escape the influence of large LLM companies, establishing AI agent adoption strategies aligned with business goals and needs, thoroughly managing data quality, strengthening security and privacy, clarifying accountability, and complying with ethical guidelines.

The Vertical AI Agent market is rapidly growing with advances in AI technology and acceleration of corporate digital transformation. The SaaS market achieved rapid growth over the past 20 years, with innovative technologies like XML HTTP requests promoting market growth. The Vertical AI Agent market is also expected to show a similar growth trajectory with LLM technology advances. AI agents will replace SaaS and expand the market size further. The Vertical AI Agent market is expected to grow faster than the existing SaaS market, with specialized AI agent solutions appearing for each industry sector. Initially, general-purpose AI platforms will lead the market, but it is predicted to develop into more specialized vertical agents. In particular, active AI adoption by large companies will accelerate market expansion.

3. Case Analysis

3.1. AI Creator Platform Cases

AI creator platforms provide specialized functions for each platform. Synthesia provides text-based video production, Hour One provides virtual human production, and Supertone provides AI voice synthesis.

Synthesia

Synthesia is an AI-based video generation platform that can produce videos featuring AI influencers with text input alone. It is utilized in marketing, education, customer service, and other areas across various industries, recording high user satisfaction. Detailed features include provision of over 100 AI avatars enabling video

production suited to target customers through avatars of various races, genders, and age groups; support for over 60 languages facilitating global marketing content production; various editing functions including templates, screen recording, music, and subtitles that improve user convenience and shorten video production time; and API integration enabling automated video production by connecting with enterprise systems.

Main applications include product explanation videos, advertising videos, and social media content in marketing; online lectures, educational materials, and employee training in education; and FAQ videos and customer response videos in customer service. Synthesia's strengths include the ability to produce high-quality videos without expensive actors and shooting equipment, and fast production time allowing video creation within minutes of text input. Weaknesses include limited emotional expression with AI avatars still not fully natural, and high dependency on the Synthesia platform making it difficult to secure independent video production capabilities (Synthesia official website, 2024).

Hour One

Hour One is an AI-based virtual human production platform that can produce AI influencers that look and speak like real people. It has been utilized in producing virtual influencers like Lil Miquela, and is utilized in various fields including advertising, entertainment, and education. Detailed features include production of realistic virtual humans difficult to distinguish from real people, with various facial expression, gesture, and voice settings possible; user-customized virtual human production; real-time interaction functionality enabling real-time conversation with virtual humans; and API integration enabling virtual human utilization by connecting with other platforms.

Use cases include advertising campaigns utilizing virtual influencers, entertainment through virtual idol and virtual actor production, and education through virtual instructor and virtual tutor production. Strengths include innovativeness in being able to produce new content through the creation of virtual humans like real people, and expandability in being usable without time and space constraints. Weaknesses include high production costs for virtual humans and potential ethical issues arising from the blurred boundary between virtual humans and real people (Hour One official website, 2024).

Supertone

Supertone is a domestic startup providing AI voice synthesis technology that can generate natural and diverse voices. It is utilized in voice content production, AI speakers, games, and other areas, and is recognized for high voice quality and technical capability. Detailed features include support for diverse timbres and emotional expressions with user-customized voice synthesis possible, high-quality voice synthesis through noise removal and audio quality improvement functions, real-time voice generation capability, and API integration functionality for voice synthesis connected to other services.

Use cases include voice content production such as audiobooks, news, and advertising enabling fast and affordable voice content production without voice actor hiring; AI speakers and chatbots with improved user experience through natural voices; and game character voice production. Strengths include excellent voice quality with natural and expressive voice synthesis, convenient usability with a simple interface, and affordable pricing. Weaknesses include limitations in expressing complex and subtle emotions and data dependency requiring large amounts of voice data for high-quality synthesis (Supertone official website, 2024).

The business model of all three platforms is based on subscription models to generate revenue, providing tiered pricing based on usage. Operations strategy involves strengthening platform competitiveness through continuous AI technology development and reflection of user feedback, and marketing strategy utilizes content marketing, social media marketing, and online advertising for platform promotion. AI creators are utilized in various fields including text-based video production, virtual human production, and AI voice synthesis, and generate revenue based on subscription models.

3.2. AI Influencer Cases

AI influencers are being utilized in various fields including marketing, entertainment, and education, and are found to have appearances and personalities like real people, communicating with fans through social media.

Lil Miquela

Lil Miquela is a virtual influencer with over 3 million followers who conducted marketing activities in collaboration with famous luxury brands such as Chanel, Prada, and Calvin Klein, building a luxurious image. She has an appearance and personality like a real person, sharing her daily life, thoughts, and preferences through social media to communicate with fans. She spread awareness through collaborations with various offline influencers.

Through unique worldview and storytelling, Lil Miquela exists as a being that crosses the boundary between virtual and reality, forming a fandom through storytelling that contains social messages such as mixed heritage and LGBTQ+, and building an original worldview through her own music and art activities. Her awareness spreading strategy involved building a luxurious image through collaboration with famous luxury brands such as Chanel, Prada, and Calvin Klein, and spreading awareness and forming a fandom through collaboration with real influencers.

Through social media utilization, she actively communicates with fans through Instagram, Twitter, and other platforms. Music activities include releasing several singles and producing music videos and participating in social movements supporting the Black Lives Matter movement and advocating for LGBTQ+ rights. Fashion and beauty field activities include attending fashion shows and collaborating with beauty brands. She has over 3 million followers and was selected as one of TIME magazine's '25 Most Influential People on the Internet.'

Recent activities of Lil Miquela include music activities with the release of single album "SOLITA" in 2023 and being included in the Coachella Music Festival lineup as the first virtual influencer; NFT issuance with the release of "Lil Miquela's Genesis Collection" in 2022 providing fans with the opportunity to own digital art; and metaverse expansion with the opening of "Lil Miquela's House" on the metaverse platform "The Sandbox" to communicate with fans in virtual space. Success strategy analysis reveals that solid storytelling with specifically set worldview, background story, and values increased fan immersion, and activities in various fields including music, art, and fashion provide fans with new experiences. She exercises positive influence by voicing social and human rights issues and participating in donation activities, and forms a fandom while actively reflecting fan opinions (AI Korea Community Newsletter).

Lu do Magalu

Lu do Magalu is the virtual influencer of Brazil's largest distribution company Magazine Luiza, with over 6 million followers. She creates cheerful content that approaches consumers in a friendly and humorous way, and is active on various platforms including YouTube, Instagram, and TikTok. She actively communicates with fans through comments and DM, performing various activities including product promotion, customer service, and social media content creation, contributing to brand recognition improvement and sales increase.

Content strategy involves approaching consumers in a friendly way with humorous content reflecting Brazilian culture, and distributing content through various platforms including YouTube, Instagram, and TikTok. Active communication with fans builds intimacy through comments and DM. Activity areas include amusing product introductions of Magazine Luiza products, customer inquiry responses and event announcements, and social media content creation for brand image improvement.

Recent activities of Lu do Magalu include continuing brand promotion with product promotion and advertising model activities for Magazine Luiza, conducting live commerce with real-time product introduction and sales on live commerce platforms, strengthening social media activities communicating with followers on TikTok and Instagram and participating in challenges and events, and launching a game character in mobile game "Free Fire" to expand recognition among gaming fans.

Success strategy analysis reveals approaching fans with a friendly and cheerful image using humor and friendliness appropriate to Brazilian culture, securing a wide fan base through content production suited to each platform's characteristics, actively responding to fan comments and DM to induce high engagement, and continuously producing new content to maintain fan interest. Future outlook includes expansion to entertainment and education fields, implementing more natural expression and movement with AI technology, and expanding into overseas markets beyond Brazil (Park Se-jeong, Herald Economy).

Luna and Lshi

Laneige developed AI influencer “Luna” with a beauty expert image and utilized her in product information provision and makeup tutorial content production. She answers beauty-related questions that consumers are curious about and provides skin concern consultations to strengthen expertise. Etude House developed AI influencer “Lshi” with a lively and trendy image suited to the young female target audience. She forms intimacy with fans by communicating through SNS and providing various content including beauty tips and makeup tutorials.

Luna’s activities include product information provision, makeup tutorial production, beauty-related question answering, and skin concern consultation, contributing to providing professional beauty information to consumers and increasing trust. Lshi’s activities include communicating with young female audiences through SNS, providing beauty tips and makeup tutorials, and contributing to improving brand image among young female demographics.

Recent activities include Luna (Laneige) continuously participating in new product launches and beauty campaign promotions, conducting beauty expert interviews and live broadcasts to communicate with fans, and producing makeup tutorials and beauty tip content to strengthen expertise. Lshi (Etude House) promotes new products and launches collaborative products, conducts SNS events and challenges to encourage fan participation, and produces diverse content reflecting young generation trends. Success strategy analysis reveals customized strategies for target customers producing AI influencers suited to brand image and target customers, creating differentiated content emphasizing expertise and intimacy, and forming relationships through active social media communication. Future outlook includes providing personalized services through AI technology, personalized beauty consulting, communicating with fans on metaverse platforms, providing virtual beauty experiences, and entering global beauty markets (Park Ji-yeon, Chosun Biz).

Additional influencer cases include Imma, a Japanese virtual influencer with a distinctive pink bob hairstyle active in fashion and beauty, collaborating with various brands and appearing in music videos and magazine cover models. Shudu Gram is the world’s first digital supermodel, a Black female model collaborating with various fashion brands, participating in campaigns, conveying social messages, and promoting diversity and inclusion values. Rozy is Korea’s first virtual influencer produced by Sidus Studio X, a woman in her 20s, actively engaging in advertising, music videos, and dramas, communicating with the MZ generation. Noonooori is a French virtual influencer characterized by large eyes and a small mouth, active in fashion and beauty as a luxury brand ambassador, conveying social messages and advocating for environmental protection and animal rights.

3.3. Vertical AI Agent Cases

Domestic AI Agent Cases

Samsung SDS’s Brity RPA is an AI-based RPA solution that automates repetitive tasks to improve enterprise productivity. It is utilized in various industries including finance, manufacturing, and distribution, enabling automation of repetitive tasks such as data entry, report preparation, and invoice processing. It can perform tasks 24 hours without human intervention, improving work efficiency and reducing costs.

KT’s AI Call Secretary uses voice recognition and natural language processing technology to automatically respond to and process customer calls. It handles various tasks including reservations, orders, and inquiry responses, shortening customer response time, improving service satisfaction, and enabling 24-hour customer response through voice recognition and natural language processing technology.

Naver’s AiRS is an AI-based recommendation system that recommends personalized content to users. It analyzes user interests, search history, and content consumption patterns to provide personalized content recommendations, improving content satisfaction and increasing platform usage time through deep learning technology.

SKT’s NUGU is an AI-based voice assistant service that understands voice commands and performs various tasks. It provides various functions including music playback, weather information, and smart home device control through voice recognition and natural language understanding technology to enhance user convenience.

Foreign AI Agent Cases

Google's Duplex is an AI-based voice assistant service that makes phone calls on behalf of users to perform tasks such as reservations and orders. It mainly provides phone reservation services such as restaurant and hair salon reservations, enhancing user convenience through natural voice synthesis and conversational context understanding.

Amazon's Alexa is an AI-based voice assistant service that performs music playback, information provision, smart home device control, and other functions. It provides various functions including music playback, shopping, information search, and smart home device control through voice recognition and natural language understanding technology to enhance user convenience.

Tesla's Autopilot is an AI-based autonomous driving system that supports vehicles in self-driving. It provides autonomous driving functions including lane keeping, vehicle distance maintenance, and automatic lane changing, utilizing computer vision and sensor technology to improve safety and driving convenience.

Netflix's Recommendation System is an AI-based recommendation system that recommends personalized content to users. It analyzes user viewing history, ratings, and preferences to provide personalized content recommendations, improving content satisfaction and increasing platform usage time through deep learning technology.

AI Agent Beauty Industry Cases

Amorepacific's Beauty Counselor Chatbot is a KakaoTalk-based beauty consultation and product recommendation service providing 24-hour beauty consultation, product recommendations, and store guidance. Main functions include answering beauty-related questions including skin concerns, product inquiries, and makeup tips; analyzing individual skin types and preferences for customized cosmetics recommendations; providing Amorepacific brand product information and purchase links; and providing nearby store guidance and event information. Agent effects include improved customer accessibility, convenient beauty consultation provision, personalized beauty solution provision, and customer satisfaction improvement.

LG H&H's AI-based hair dye system performs hair color recommendations and customized hair dye production through customer facial photo analysis. Main functions include analyzing face shape, skin tone, and hair color for optimal hair color recommendations; simulating post-dyeing appearance changes and predicting dyeing results; producing personalized hair dyes to reduce dyeing failures. Agent effects include improved dyeing satisfaction, reduced dyeing failures, personalized dyeing experience provision, and shortened dyeing time.

Olive Young's AI Personal Color Diagnosis Service provides personal color diagnosis and cosmetics recommendations through kiosks. CJ OliveNetworks' AI-based skin analysis solution performs skin condition analysis and customized cosmetics recommendations through in-store kiosks and tablet PCs, including face photo shooting, skin tone analysis, personal color diagnosis, and cosmetics color and product recommendations based on diagnosis results.

Zamface's AI beauty app provides virtual makeup, hair styling, and accessory wearing simulation. Main functions include virtual experiences of various cosmetics, hair styles, and accessories; AR technology-based realistic simulation provision; and user face recognition for customized style recommendations. Agent effects include diverse style experiences, improved pre-purchase satisfaction, and cosmetics purchase decision support.

L'Oréal's Beauty Genius provides virtual makeup simulation and customized product recommendations through a mobile app. Main functions include virtual experiences of various L'Oréal brand products; AR technology-based real-time makeup application and result confirmation; and skin tone analysis and personalized product recommendations. Agent effects include product experience without store visits, online sales promotion, and increased customer loyalty.

Sephora's Virtual Artist provides virtual makeup experiences using AR technology through the Sephora mobile app and in-store kiosks. Main functions include virtual experiences of various beauty brand products; AR technology-based real-time makeup application and result confirmation; face recognition and accurate cosmetics position application; and deep learning-based personalized makeup recommendations. Agent effects include increased customer engagement and brand image improvement.

Proven Skincare's Skin Genome Project is an AI-based personalized cosmetics recommendation platform. Main functions include analysis of skin genetic information, lifestyle, and environmental factors; big data and AI technology-based personalized cosmetics recommendations; and skin condition prediction and optimal cosmetics ingredient and product recommendations. Agent effects include science-based personalized beauty solutions, improved skin care effectiveness, and leading the personalized cosmetics market.

Function of Beauty's AI-based customized hair care manufactures personalized shampoo, conditioner, and treatment. Main functions include scalp and hair condition analysis for personalized product manufacture; user selection of scent, color, and ingredients; and regular delivery service provision for continuous hair care support. Agent effects include personalized hair care solutions, increased repurchase rate, and brand loyalty strengthening.

Rvieve's AI skin diagnosis solution performs camera-based skin analysis and customized skincare routine recommendations. Main functions include skin photo shooting and analysis through mobile app; skin type and problem diagnosis; customized skincare routine recommendations; and product recommendations and skin management tips. Agent effects include improved skin care effectiveness, enhanced accessibility through mobile app integration, and personalized skin management solution provision.

Coty's AI-based fragrance development develops new fragrances utilizing AI. Main functions include consumer data analysis and fragrance preference prediction; AI-based fragrance combination and new scent development; and reduced fragrance development costs with improved success probability. Agent effects include innovative fragrance development, strengthened market competitiveness, and leading AI-based fragrance development.

Perfect Corp.'s YouCam Makeup provides virtual makeup experience and skin analysis utilizing AR technology. Main functions include virtual experiences of various beauty brand products; AR technology-based real-time makeup application and result confirmation; and skin analysis and customized beauty tips provision. Agent effects include beauty app market leadership, cosmetics purchase decision support, and online shopping activation.

AI Technology Cases Applied in the Beauty Industry

Analyzing the various algorithms and IT technologies incorporated in AI Agent cases: Natural Language Processing (NLP) is used in chatbots, voice assistants, and other systems for user language understanding and natural response generation. Deep Learning is utilized for large data learning, pattern analysis, and prediction. Computer Vision is utilized for image recognition, analysis, and processing. Augmented Reality (AR) synthesizes virtual information with the real world for virtual makeup experiences and similar applications. Big Data Analytics analyzes vast data to extract useful information. Machine Learning is utilized for data learning, prediction, and decision-making. Knowledge Graphs structure relationships between information to provide accurate information.

In Amorepacific's Beauty Counselor Chatbot, Natural Language Processing (NLP) technology is used for the chatbot to understand customer questions and generate natural responses, identifying user intent through morphological, syntactic, and semantic analysis. Deep Learning technology generates question-answer pairs by learning large amounts of text data, providing personalized recommendations by analyzing customer skin concerns and product preferences. Knowledge Graph technology builds cosmetics ingredients, skin types, and product information in knowledge graph form to enable the chatbot to provide accurate and reliable information.

In LG H&H's AI-based hair dye system, Computer Vision technology analyzes customer facial photos to recognize face shape, skin color, and hair color, and utilizes image generation and synthesis technology to simulate post-dyeing appearances. Deep Learning learns the relationship between facial features and dyeing results to recommend optimal hair colors, and learns various hair dye combinations and dyeing result data to support customized hair dye manufacture.

In L'Oréal's Beauty Genius, Augmented Reality (AR) technology is used to virtually apply makeup to the user's face for real-time result confirmation. Computer Vision technology accurately recognizes and tracks the user's facial features (eyes, nose, mouth, etc.), and AR technology analyzes face movements and lighting changes in real-time for natural makeup effect application. Deep Learning technology analyzes the user's facial features,

skin tone, and preferences to recommend makeup styles and products suited to the individual.

AI Agents are implemented through the combination of various IT technologies, and each technology acts complementarily to provide users with more accurate and personalized services. More advanced AI technology is expected to be incorporated into the cosmetics and beauty industry in the future, leading new innovations.

4. Vertical AI Agent Operation Strategy Suggestions

4.1. Multi-Layered Strategic Planning for K-Beauty Indie Brands

Using 3C analysis and McKinsey 7S analysis, the 3C framework (Customer, Competitor, Company) is used to understand the cosmetics market situation. McKinsey 7S framework (Strategy, Structure, Systems, Shared Values, Skills, Style, Staff) analysis is used to evaluate the internal capabilities of K-beauty indie brand companies (Mark P. Cosentino, 2019).

3C Analysis

Customer: Analyzing recent customers of beauty brands, the MZ generation values conscious consumption and has high interest in ‘clean beauty’ and ‘vegan cosmetics.’ Demand is increasing for personalized cosmetics such as products suited to skin type and preferences, and ‘customized cosmetics’ including ‘AI-based skin diagnosis.’ Purchases through online shopping malls and mobile apps are increasing, greatly influenced by live commerce and SNS marketing.

Competitor: Domestic large corporations such as Amorepacific and LG H&H are competing, with increasing small-to-medium brands targeting various niche markets. Competition with global brands such as L’Oréal and Estée Lauder is intensifying, and IT companies and pharmaceutical companies entering the cosmetics market are increasing.

Company: Strengths include innovative product development, excellent marketing strategy, and strengthened online sales channels. Weaknesses include high prices, insufficient brand recognition, and difficulties in overseas market entry. Opportunities include targeting the MZ generation, entering the personalized cosmetics market, and strengthening digital marketing. Threats include intensifying competition, rising raw material prices, and changing consumer trends.

McKinsey 7S Analysis

Strategy: Marketing strategy targeting the MZ generation, digital transformation, and overseas market entry strategy. **Structure:** Inter-departmental cooperation framework and efficient decision-making structure. **Systems:** Product development process, quality management system, and customer management system. **Shared Values:** Customer satisfaction, innovation, and sustainable management. **Skills:** R&D capabilities, marketing capabilities, and digital capabilities. **Style:** Adaptability to change, communication ability, and vision presentation ability. **Staff:** Specialized personnel acquisition and talent development programs.

Comprehensively considering 3C analysis and 7S analysis, the current state and prospects of the cosmetics industry are analyzed, and the company’s strengths and weaknesses are identified to establish strategies for strengthening competitiveness. ‘Clean beauty’ and ‘vegan cosmetics’ should be developed in line with the MZ generation’s conscious consumption trend, and SNS marketing and influencer marketing should be actively utilized. AI-based skin diagnosis and customized cosmetics recommendation services should be utilized to target the personalized cosmetics market. Online sales channels should be strengthened, and digital competitiveness should be enhanced by introducing virtual experience services utilizing AR/VR technology and live commerce.

4.2. Business Model Strategy Planning for Vertical AI Agent Companies

Multi-layered strategic planning is conducted using the Business Model Canvas framework (Alexander Osterwalder and Yves Pigneur, 2011).

Customer Segments

Target industry/field: Clearly define which industry or field the AI agent will specialize in (e.g., healthcare,

finance, education, law, manufacturing, distribution). Specific customer group: Define which customer group within the relevant industry to target (e.g., for healthcare: large hospitals, private clinics, healthcare professionals, patients). Needs identification: Deeply understand the target customer group's needs and pain points, and clarify what value AI agents can provide (e.g., for healthcare: improved consultation efficiency, improved diagnostic accuracy, improved patient satisfaction).

Value Propositions

Problem solving: Develop AI agents that solve target customer group pain points and improve work efficiency (e.g., for healthcare: medical image analysis, diagnostic support, treatment planning). Differentiated features: Provide original features and performance differentiated from competitors (e.g., high accuracy, fast processing speed, user-friendly interface, diverse data integration). New value creation: Create new value through AI agents and provide customers with innovative experiences (e.g., predictive analysis, personalized services, automated task processing).

Channels

Various channel securement: Provide AI agents through various online, offline, and mobile channels. Partnership: Expand distribution channels through collaboration with partners in the relevant industry (e.g., for healthcare: hospitals, medical device companies, pharmaceutical companies). Direct sales: Directly sell AI agents through own websites and app stores.

Customer Relationships

Professional support: Provide professional technical support and training for AI agent use. Continuous communication: Continuously communicate with customers through online communities, newsletters, and webinars to collect feedback. Customized services: Customize AI agent settings according to customer requirements and provide personalized services.

Revenue Streams

Subscription model: Provide AI agents in subscription form and charge monthly or annual fees. Usage-based pricing: Charge fees according to AI agent usage. License sales: Sell AI agent software licenses. Additional services: Provide AI agent training, consulting, and maintenance to generate revenue.

Key Resources

AI technical capability: Secure a talent pool including excellent AI engineers, data scientists, and machine learning experts. Data: Acquire and manage high-quality data necessary for AI agent learning and performance improvement. IT infrastructure: Build scalable and secure IT infrastructure for AI agent development and operation.

Key Activities

AI agent development: Design, develop, train, and deploy AI agents specialized for target specialized fields. Data collection and analysis: Build data pipelines for AI agent training and performance improvement, and perform data analysis. Product marketing and sales: Promote AI agents to target customers and generate sales. Customer support: Provide technical support and customer service to AI agent users.

Key Partnerships

Technology partners: Collaborate with AI technology providers, cloud server providers, and data providers to strengthen the technology base. Industry partners: Collaborate with leading companies, research institutes, and government agencies in the relevant specialized field to acquire domain expertise and discover business opportunities. Channel partners: Collaborate with distributors, resellers, and systems integrators to expand sales channels.

Cost Structure

R&D costs: Invest in AI technology development, data acquisition, and talent acquisition. IT infrastructure costs: Invest in IT construction including cloud computing, data storage, and network security. Marketing and sales costs: Allocate expenses for marketing, sales team operation, and customer acquisition. Operating costs:

Manage operating expenses including customer management, product maintenance, and administrative segmentation.

4.3. Vertical AI Agent Strategy for K-Beauty Indie Brands

K-Beauty Indie Brand Success Analysis

K-beauty indie brands have rapidly grown through ODM utilization, online sales, influencer marketing, and cost-performance strategies. Business model components include ODM utilization through contracting manufacturing to ODM companies such as Korea Kolmar and Cosmax to reduce R&D and production costs; online sales through direct sales on platforms like Amazon to minimize distribution margins; influencer marketing through viral marketing utilizing short-form content and influencers for brand recognition and product promotion; and cost-performance through selling high-quality products at relatively low prices.

Core competitiveness includes providing high-quality products based on innovative ingredients and technology, diverse product lineups tailored to consumer needs, trendy designs reflecting the latest trends, and fast product launches enabled by ODM utilization. US market success factors include targeting American consumers with reasonable prices relative to high quality, easy accessibility through online platforms like Amazon, and utilizing US influencers to spread K-beauty trends.

Vertical AI Agent Business Strategy for K-Beauty Indie Brands

Utilizing Vertical AI Agents, K-beauty indie brands can innovate personalized cosmetics recommendations, marketing automation, product development, and customer service. User skin data analysis and AI image analysis technology diagnose user skin conditions to recommend optimal products considering skin type, concerns, and preferences. AR technology provides virtual makeup experiences with cosmetics use. AI-based marketing automation and AI-based customer segmentation discover potential customers. Customized advertising creates and exposes targeted customer-based customized advertisements. AI-based marketing measures and improves performance. AI-based ingredient analysis predicts optimal ingredient combinations and efficacy. AI-based market trend analysis discovers new product development ideas. AI chatbots respond to 24-hour customer inquiries. AI-based customer data analysis provides personalized consultations.

Initial stage: AI-based skin analysis and trend analysis develop competitive products. Online platform entry on Amazon, Shopify, and own mall construction. Influencer marketing proceeds centered on short-form platforms like TikTok and Instagram. Growth stage: AI customized recommendation service provides user skin data analysis and customized product recommendations. Marketing automation analyzes marketing effects through AI-based target customer discovery and customized advertising. Product lines are expanded through AI-based ingredient analysis and trend analysis. Global market localization strategies are established based on overseas market success experience. Maturity stage: AI-based new product development utilizes AI-based ingredient analysis, efficacy prediction, and trend analysis. AR virtual makeup provides AR technology-based virtual makeup experiences. AI-based personalized consultation analyzes customer data for personalized consultation. Sustainable growth: ESG management adoption and social responsibility fulfillment.

4.4. Vertical AI Agent Operation Strategy for K-Beauty Indie Brands

This section presents market entry and competitiveness strengthening strategies for K-beauty indie brands utilizing Vertical AI Agents. The focus is on concretizing phased strategies from initial market entry to global market expansion, and presenting a differentiated business model through collaboration with AI creators.

Stage 1: Collaboration with AI Creators

AI influencer production: Collaborate with AI creators to produce AI influencers optimized for K-beauty indie brands. Develop AI influencers with distinctive personalities matching brand image to conduct differentiated marketing.

Stage 2: Building Partnerships with K-Beauty Companies

Prospective customer discovery: Discover K-beauty companies with innovative products and high growth potential. Prioritize companies interested in AI influencer marketing and willing to actively collaborate.

Customized marketing proposals: Analyze each company's product characteristics and target customer base to propose customized marketing strategies utilizing AI influencers. Emphasize contributions to company sales increase through various marketing activities including product promotion video production, SNS content creation, and live commerce conduct. Contract condition negotiation: Clearly negotiate marketing agency contract conditions and build a cooperation model that creates mutual benefit. Specify contract period, performance measurement method, commission, and other details clearly to conclude a transparent and fair contract.

Stage 3: AI Influencer Production Guidelines

This guideline for K-beauty indie brands to effectively utilize AI influencers presents specific directions for designing core elements including AI influencer appearance, personality, voice, and story. The AI influencer's appearance should be designed considering the target customer group's age, gender, cultural background, and preferences. Consistency should be maintained with brand image. Variety should be reflected in terms of race, body type, and style to avoid reinforcing stereotypes. Latest fashion and beauty trends should be reflected. The AI influencer's personality should reflect brand values. The preferred personality type of the target customer group should be analyzed and reflected. A friendly and likable personality forms positive relationships with consumers and increases brand loyalty. AI voice synthesis (TTS) technology should be utilized to produce a natural and attractive voice suited to the brand image and target customer group with various emotional expressions. The AI influencer's story should be linked with the brand story for consistency, building an original worldview that stimulates consumer interest and forms a fandom through storytelling that consumers can empathize with.

Stage 4: AI Influencer Development and Nurturing

Target customer group definition: The first step in AI influencer development is clear target customer group setting, specifically defining age, gender, and interests to develop an AI influencer that reflects target customer group characteristics. AI influencer persona setting: Set appearance, personality, speech pattern, and style that align with the target customer group. High-quality content production: Produce various content including K-beauty product introductions, makeup tutorials, and beauty tips in high quality using professional shooting and editing techniques. Forming empathy with consumers: Form empathy with consumers through daily content, utilize various content formats including short-form videos and live broadcasts, and build fandom by inducing consumer participation through events and challenges. SNS channel operation: Open and actively operate major SNS channels including YouTube, Instagram, and TikTok using AI influencers, building fandom through two-way communication with followers.

Stage 5: Marketing Campaign Execution and Performance Analysis

Data-based campaign operation: Execute AI influencer marketing campaigns and analyze campaign performance in real time using various metrics including follower growth rate, content views, website traffic, and product sales. Performance reporting and improvement: Provide K-beauty companies with campaign performance reports and modify marketing strategies based on data analysis results to improve campaign efficiency. Long-term partnership maintenance: Maintain continuous cooperation relationships with K-beauty companies and build trust. Expand the business by developing new marketing solutions and discovering various business models utilizing AI influencers.

Stage 6: Vertical AI Agent Differentiation Strategy

User-friendly interface: Design the AI Agent platform's user interface intuitively and easily to support K-beauty companies in conveniently managing marketing campaigns. Strong customer support: Operate a professional customer support team to quickly resolve K-beauty companies' inquiries and provide technical support needed for marketing campaign operation. Data analysis and utilization: Analyze campaign performance data to provide K-beauty companies with actionable insights and support data-based decision-making.

Stage 7: Vertical AI Agent Platform Strategy

AI creator function advancement: Improve AI creators' autonomy, intelligence, and interaction capabilities utilizing AI agent technology. Develop AI creators to independently plan and produce content and communicate naturally with users. Platform operation automation: Maximize efficiency by automating platform operation

tasks including customer inquiry responses, content management, and marketing activities utilizing AI agents. Personalized services: Provide user-customized AI creators, content, and marketing solutions through AI agents to increase user satisfaction.

SaaS model combination: Diversify platform revenue generation models by combining AI agent-based services with the SaaS model. Provide AI creator production tools, content production tools, and marketing automation tools in subscription form. K-beauty specialized applications: Develop various AI applications supporting indie brand marketing activities. Develop AI-based product recommendation systems, AI-based advertising copy generation tools, and AI-based marketing performance analysis tools to support strengthening K-beauty indie brand competitiveness. AI agent-based platform construction: Implement platform operation automation, personalized service provision, and user experience improvement using AI agents to enhance platform value.

After achieving success in the K-beauty indie brand platform, expand the business to other industry sectors based on the extensibility of AI agent technology for continuous growth. AI service expansion: Diversify revenue generation models and strengthen platform competitiveness by providing additional services including consulting, education, and data analysis.

Stage 8: Vertical AI Agent Revenue Strategy

This presents a monetization strategy for sustainable growth of the AI Agent-based K-beauty indie brand platform. Various pricing models and price strategies are presented to maximize the value of AI creator and platform services and provide attractive pricing policies to K-beauty indie brand customers.

AI Agent platform functions and revenue model: Revenue is generated through AI creator search and transactions, AI creator sharing, content production tool provision, marketing campaign support functions, data analysis and reporting functions, and collecting a certain percentage of revenue generated during marketing campaigns utilizing AI influencers as commission. Platform usage fees are collected in subscription form with various subscription models offered considering the number of users, function restrictions, and usage restrictions. In-platform advertising placement and marketing agency services for K-beauty indie brands are provided. Customer analysis data usable in K-beauty indie brand marketing activities is sold. Revenue generation opportunities are secured through partnerships with K-beauty-related companies.

Usage-based pricing charges according to service usage such as AI creator usage time, number of produced content pieces, and marketing campaign performance. Subscription model diversification provides subscription models variously configured with user numbers, function restrictions, and usage restrictions according to K-beauty indie brand scale and budget. Hybrid model utilization maximizes profitability by introducing a hybrid pricing model combining subscription and usage-based models.

Price strategy: Value-based pricing quantifies effects obtainable through AI creator and platform services such as brand recognition improvement, sales increase, and customer satisfaction improvement to reflect in prices. Competitive price analysis analyzes competitive AI creator and platform service prices to secure price competitiveness of own services. Premium price strategy sets premium prices for high-quality AI creator and platform services to increase profitability. Price information is transparently disclosed on websites or within platforms to gain customer trust. Pricing standards and bases are clearly presented to increase customer understanding. Flexible pricing policies are operated according to customer characteristics and needs; for example, startups or SME customers can be offered discounted prices or special promotions.

5. Conclusions

5.1. Summary and Conclusions

This study presented a Vertical AI Agent platform construction and operation strategy based on AI creators and AI influencers as a core strategy for global market entry and competitiveness strengthening of K-beauty indie brands. By actively utilizing AI technology beyond existing marketing methods, this study explored ways for K-beauty indie brands to effectively introduce their original brand stories and innovative products to the global market.

Research results confirmed that AI creator and AI influencer platforms can greatly contribute to maximizing

indie brand marketing efficiency, improving brand recognition, and strengthening competitiveness. In particular, through personalized content production, target customer group analysis, and 24-hour real-time customer response, it is expected that these technologies can overcome the limitations of existing marketing methods and provide a new dimension of customer experience.

For successful operation of the Vertical AI Agent platform, securing differentiated AI creators, building user-friendly interfaces, establishing strong customer support systems, and building data analysis and utilization frameworks are important. In particular, AI model performance must be continuously improved through high-quality data acquisition and analysis, and customer-customized services must be advanced.

With future advances in AI agent technology, the AI creator and AI influencer markets are expected to grow even faster, and their importance in the K-beauty indie brand market will be further highlighted. K-beauty indie brands can secure differentiated competitiveness through Vertical AI Agent platforms and lay the foundation for growth into unicorn companies in the global market. By actively utilizing AI technology to provide personalized services, strengthening customer relationships, and developing innovative products, they will be able to achieve continuous growth.

5.2. Implications

This study provides important implications in that it presents a new paradigm for global market entry and growth of K-beauty indie brands.

First, K-beauty indie brands must actively utilize AI Agent platforms based on AI creators and AI influencers to secure competitiveness in the global market. AI technology adoption is essential to quickly respond to changing market environments and meet consumer needs. Through AI-based platforms, marketing efficiency can be maximized, communication with customers strengthened, and brand value elevated.

Second, with AI technology advances, the scope of AI creator and AI influencer utilization is expected to expand further. Beyond simple content production, AI technology can be utilized in various fields including product development, customer management, and market analysis. K-beauty indie brands must pay attention to these technology advances and proactively adopt them to secure competitive advantages.

Third, continuous discussion is needed about ethical utilization of AI technology and its social impact. With the development of AI technology, ethical issues such as data security, personal information protection, and algorithmic bias are being raised. K-beauty indie brands must consider ethical aspects when utilizing AI technology and fulfill social responsibilities.

In conclusion, with advances in AI agent technology, AI creator and platform markets are expected to grow further and play important roles in the K-beauty indie brand market. It is expected that Vertical AI Agent-based K-beauty indie brand platforms can achieve sustainable growth and greatly contribute to K-beauty industry development through the monetization strategies, operation strategies, and AI technology utilization strategies presented in this study. It is hoped that this study will be utilized as a guideline for successful global market entry of K-beauty indie brands, and that continuous research should be conducted in line with future AI technology advances and K-beauty industry growth.

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