

# Exploring a Meta-cosmic Way out for Cambodia's Development

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## Abstract

The cooperation between Chinese and Cambodian vocational colleges and universities and enterprises aims to realize resource sharing and teacher exchange, and enhance the influence and core competitiveness of vocational colleges on both sides. This cooperation not only meets the needs of mutually beneficial cooperation in vocational education between China and Cambodia, but also actively promotes the reform and development of vocational education in both countries. The transnational vocational education alliance established with Cambodia has become a new model with the characteristics of The Times.

## Keywords

University Cooperation; Higher Vocational Colleges; Educational Model.

## 1. Introduction

In 2016, under the framework of the Belt and Road Initiative, the Ministry of Education issued a policy document entitled "Promoting Education Action under the Belt and Road Initiative". The signing of these cooperation documents has promoted the orderly progress of various practical cooperation between China and Cambodia.

## 2. Background

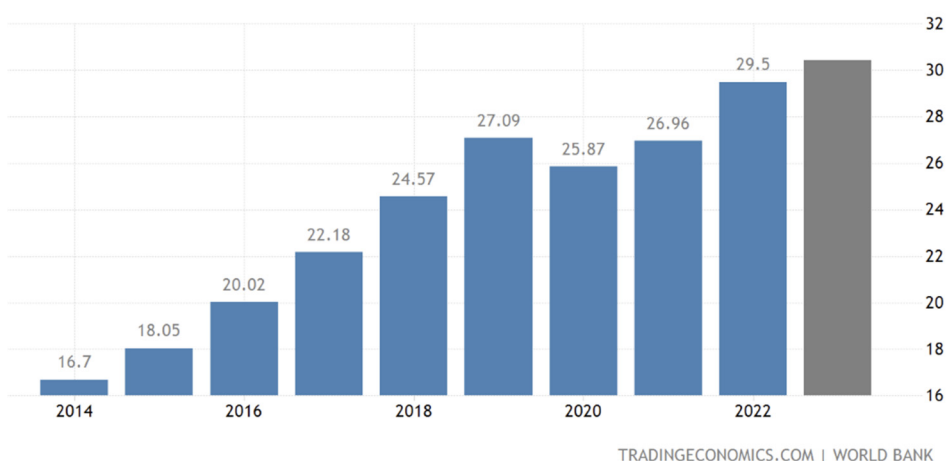


Fig 1. Cambodia's GDP development in recent years (2014-2022)

The total population of the Kingdom of Cambodia is about 16 million, and its economy is mainly based on agriculture, manufacturing, and tourism. With the rapid economic rise of Southeast Asia, Cambodia has maintained steady economic growth in recent years (see Figure 1). In the agricultural sector, rice, rubber, cotton, coffee and other agricultural products are important exports of Cambodia, and Cambodia is one of the largest rice exporters in the world. With the

upgrading and transformation of China's manufacturing industry and the relocation of a large number of labor-intensive industries, in the manufacturing sector, Cambodia has achieved rapid development in the past few years, especially the textile and garment manufacturing industry has attracted a large number of investments.

However, Cambodia still faces challenges and problems. Industry is relatively weak, infrastructure construction and employment opportunities are insufficient, the level of education and skills training is relatively low, lack of scientific and technological innovation capacity. In addition, tourism and manufacturing have also been affected in the post-epidemic era. These are the challenges that need to be addressed urgently in Cambodia.

### 3. Research Significance

From the professional perspective of artificial intelligence and virtual reality, through in-depth analysis of the successful reasons for the rapid development of Korean electronic games in the 1990s, combined with the current development situation of Cambodia, it is of great significance to put forward the adjustment of Cambodia's digital reform. Although Cambodia is a relatively backward country in Southeast Asia, in recent years, its achievements in economic development have begun to attract the attention of countries around the world.

Taking Sabay Company in Cambodia as an example, through in-depth study of the development process of the company and case analysis of the development prospects of metauniverse and blockchain technology in Cambodia, explore the development prospects of metauniverse and blockchain technology in Cambodia. At the same time, we should also think about how to support the development of vocational education by integrating metaverse and blockchain-related skills into professional education and industrial integration, and explore feasible solutions for the development of Cambodia's digital economy, and ultimately realize the curve of Cambodia's economic development.

### 4. Analysis of the Development of Korean Online Games

At present, the online game industry has become an important pillar industry in South Korea in terms of economic growth and foreign cultural export.

From the early domestic popular "Legend", to the later widely known "Rocky Heroes" and "NDF Underground City", etc., to the global popular "Jedi Survival" in recent years, these are successful models of the Korean game industry. South Korean online games have gained widespread popularity and market share both in China and globally. This shows that South Korean video games have reached the top level of European, American and Japanese game makers in terms of technology and gameplay.

South Korea's gaming industry has grown rapidly since the mid-1990s. After the outbreak of the financial crisis in 1997, South Korea's real economy suffered a crisis, and the government subsequently carried out large-scale reforms in the direction of the cultural industry. To revitalize the cultural industry, the government has enacted the Cultural Industry Revitalization Law and a series of policies aimed at encouraging the development of the game industry, and has built a high-speed network infrastructure across the country. Gaming companies collaborate with TV shows to promote online games, establish associations and regulate e-sports competitions.

In the early days, the Korean gaming industry was dominated by arcades, which remained popular despite the entry of Japanese game consoles. With the popularity of personal computers and computer games, the Korean gaming market has shifted to computer platforms, and domestic manufacturers have made computer game development a major area. At that time, the global game market was dominated by stand-alone games in Europe, the United States and

Japan, while Korean game companies chose online games as a new development direction and seized the opportunities brought by the Internet.

Finally, under a series of government policies to support the game industry, and the keen insight and choice of enterprises, South Korea's game industry only took more than 20 years to develop into today's world game power.

## **5. Analysis of Metaverse and Blockchain Development**

### **5.1. What is the Metaverse**

The meta-universe is a new field that combines 5G, blockchain technology, virtual reality and other technologies, and it describes a virtual and shared multidimensional digital space in which people can interact in various ways and create experiences through the network. It blends the real and virtual worlds and has a wide range of applications and potential.

With the popularity of home working during the epidemic and the development of 5G network technology, the concept of the meta-universe has begun to receive attention. Seeing it as the future, many tech companies and startups have begun to explore and develop metaverse technologies and platforms to enable more immersive and social virtual experiences. However, the meta-universe is still in its early stages, requiring further development and refinement of technologies and standards, and addressing a range of technical and privacy issues.

### **5.2. Application of Metaverse**

The meta-universe can be seen as a vast network that connects various virtual reality worlds, online games, social media platforms, and other digital content. It provides multiple opportunities for people to interact in real time with friends, family and strangers in virtual Spaces, to participate in virtual events, parties and performances, and to share their experiences and feelings with each other.

In addition, the meta-universe also brings new possibilities to the business sector, where people can visit virtual stores to browse and buy goods in a more immersive and personalized way, providing new sales channels for businesses. In the field of education, the Meta-Universe provides students with a new way of learning that can participate in interactive teaching and training activities in a virtual environment, and can interact with teachers and other students in real time to improve learning results. In addition, the meta-universe has also changed the way of work, people can collaborate and meet remotely in a virtual environment, share a virtual workspace, and realize real-time communication and cooperation.

### **5.3. Application of Blockchain Technology**

Among them, blockchain technology, which can provide decentralized management and security, has played an important role in making the management of transactions, ownership and assets in the meta-universe more reliable and transparent, and has broad application prospects.

First, blockchain technology can improve the efficiency and transparency of government agencies' services. The documents and publicity materials of government departments can realize the openness and transparency of data and cannot be tampered with, which can further improve administrative efficiency and reduce corruption. In banking, blockchain can provide more secure payment methods, reducing costs and human-caused deviations in bank data management. In terms of investment, blockchain technology can also provide a more transparent and secure trading environment, reducing the involvement of intermediate actors in traditional transactions. In the medical industry, the traceability features of blockchain can greatly improve the management and sharing of medical data. Hospitals can better manage patient case data, realize the rapid transmission and sharing of patient data, and ensure the

safety of patient data. Finally, blockchain technology can also be used in the traceability of drugs to ensure the quality and provenance of drugs and reduce the circulation of inferior drugs.

Blockchain NFT art collections and games are also unique and compelling areas within it. NFT is a digital asset based on blockchain technology, and each NFT has a unique identity and proof of ownership, making it uniquely valuable and verifiable in the digital realm.

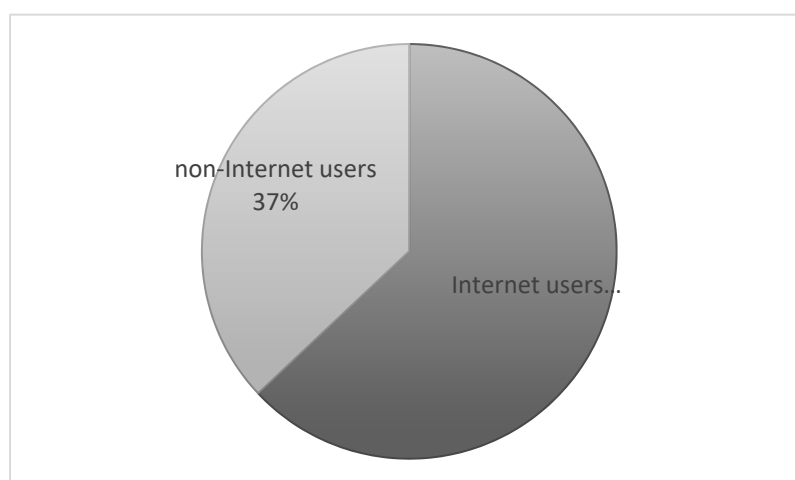
In the field of NFT art collection, artists can convert their works to NFT and verify their uniqueness and authenticity on the blockchain. This makes ownership and transaction records transparent and immutable. By purchasing NFT artwork, art lovers can own the digital rights. Art owners can display, trade or sell their collections in the meta-universe, interacting and communicating with other art lovers.

In the field of NFT gaming, blockchain technology provides real and provable ownership of virtual assets and items in games. Players can collect, purchase and trade NFT virtual assets to own unique in-game items and characters. This true ownership allows players to freely circulate and transfer assets both inside and outside the game. At the same time, NFT games also provide players with more gaming experience and financial incentives, they can participate in the game, complete quests, and trade NFT virtual assets to earn revenue and rewards. This will be the direction of the relevant enterprises in Cambodia.

## 6. Lessons from Cambodia's Development Experience

### 6.1. Domestic Internet Development in Cambodia

Although Cambodia is an agricultural country, the Internet technology is relatively backward. However, as of 2020, Internet penetration in Cambodia has greatly improved, reaching 63% penetration. With the development of smartphones, mobile Internet penetration is high in Cambodia. While Internet infrastructure has improved over the past few years with government investment, challenges remain. There is an imbalance between urban and rural infrastructure construction, and although Internet connection speeds are faster in big cities and major tourist areas, Internet connection speeds and coverage are still relatively poor in rural and remote areas.



**Fig 2.** Cambodia's Internet penetration rate in 2020

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In order to further promote the development of the digital economy, the Cambodian government launched the Digital Technology Strategic Plan (2023-2027) in June 2023. The goal of the plan is to improve public services and work efficiency, and strengthen cybersecurity.

The Government of Cambodia has established the National Council on Digital Economy and Digital Society to strengthen policy implementation and coordinated action across sectors. The Council's responsibilities include monitoring the implementation of policies, coordinating the actions of various departments, and evaluating the effectiveness and results of policies. In order to better promote the development of the digital economy, the Cambodian government also issued a decree in June 2023 calling for the establishment of the General Directorate of Digital Economy. The agency will participate in the formulation and implementation of policy strategies related to the digital economy and conduct research and analysis on the development trends of the digital economy.

With a series of policies and measures introduced by the Cambodian government, it is believed that in the future, Cambodia's Internet technology companies will be able to develop to a large extent, but they still face problems at present. The biggest problem is the widespread existence of electronic fraud syndicates and online gambling platforms disguised as online game companies in Southeast Asia. This will still be a heavy task for the Cambodian government to solve, which requires the Cambodian government to take measures to combat related crimes and purify the local Internet technology environment in Cambodia.

## 8.2. Transformation Thinking of Related Cambodian Enterprise Cases

Sabay is a leading Internet company in Cambodia, founded in 2007. At first, Sabay started as a gaming company and launched local online games in Cambodia through agency. Over time, it has gradually transformed into media, film and television, games, payments and online services. Today, Sabay has grown into one of the most important digital content companies in Cambodia, with news sites, video content, games, and a variety of other digital assets. The company meets the various needs of users in Cambodia, providing a rich variety of digital content. Within Cambodia, Sabay is considered one of the largest and most important Internet companies, comparable to domestic giants such as Tencent or Alibaba.

Sabay's corporate transformation has therefore played an important role in the development of related metaverse industries in Cambodia, as blockchain gaming has rapidly increased in recent years, especially in Southeast Asian countries, developing entirely new industry ecology and employment models. In April 2022, Singapore-based online gaming platform company MetaOne (one of the largest SAAS platforms incorporating large games and guild into blockchain games, aiming to drive the growth of the Web 3.0 GameFi market by building a single platform) announced a partnership with Sabay for the development of blockchain games in Cambodia. MetaOne's GameFi platform connects 2.8 million gamers in Cambodia to the blockchain to create a new era of gaming. Bring new sources of employment and income to the people of Cambodia through the blockchain gaming economy of the meta-universe.

This transformation and development will enable Sabay to become a leading player in the Cambodian metaverse industry, setting an example for the standardized development of the industry and enabling the rapid development of the digital sector in Cambodia. Sabay has created new opportunities and new economic growth points for Cambodia through its development in the metaverse sector. By establishing a blockchain-based meta-universe platform, it provides users with a secure, transparent and trusted interactive environment, accelerating the development of Cambodia's digital economy.

With the transformational development of Sabay's company, entrepreneurs and entrepreneurs in Cambodia are also inspired. Begin to focus on and explore the application of metacomers, blockchain, and other related technologies to find innovative business models and opportunities. This technological reference and transformation will bring new vitality and competitiveness to Cambodia's economic development.

In short, the transformation and development of Sabay has laid the foundation for the standardization of the Cambodian metaverse industry, and has brought strong impetus to the development of related digital fields in Cambodia. By learning from the development model of Chinese Internet companies and combining related technologies such as metauniverse and blockchain, Sabay has created new opportunities and economic growth points for Cambodia and promoted the development of Cambodia's digital economy.

## 8.3. Adjustment of Vocational Education and Integration of Industry and Education

The Cambodian government should further combine the successful experience of relevant enterprises with the development of vocational education to carry out the strategy of integration of industry and education. Vigorously carry out the reform and development of vocational education, and train talents related to the digital needs of the meta-universe such as virtual reality, blockchain, 5G, and cloud network for science and technology enterprises. In order to achieve the goal of integrating industry and education, the Cambodian Government can take the following measures:

1. Optimize the policy environment: formulate policies to encourage enterprises to participate in vocational education, and provide corresponding support and incentive measures. Establish



a legal, policy and management system conducive to the cooperation between industry and educational institutions to provide a good policy environment for the integration of industry and education.

2. Strengthen the cooperation between industry and educational institutions: establish a long-term cooperation mechanism between industry and educational institutions, including the establishment of partnerships with scientific and technological enterprises, innovative enterprises, etc., to jointly carry out the design and implementation of vocational education projects and courses. Through close cooperation between the industry and educational institutions, we ensure that the educational content matches the needs of the industry, and cultivate talents who meet the digital needs of the meta-universe.

3, vocational education reform and innovation: increase investment in vocational education, improve vocational education teachers and teaching facilities, improve the quality of education and teaching level. Educational institutions are encouraged to innovate teaching models and methods, and combine advanced technologies such as virtual reality and online learning to provide more flexible and efficient teaching methods.

4. Cooperation platform of China-Cambodia Vocational Education Alliance: Strengthen the construction of cooperation platform of China-Cambodia vocational Education Alliance to provide better opportunities for exchanges and cooperation between the two sides in the field of vocational education. Through multilateral cooperation in the fields of overseas student education, teacher training, integration of overseas production and education, and technology research, the sharing of educational resources and mutually beneficial and win-win development are promoted.

Through the implementation of the above measures, Cambodia can further strengthen the integration of vocational education and education, and cultivate high-quality talents who meet the digital needs of the meta-universe. This will provide strong support for Cambodia's industrial upgrading and economic development, and promote in-depth cooperation and exchanges between China and Cambodia in the field of vocational education.

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