

Research on the Development Path of Promoting the Internationalization of Traditional Chinese Medicine in Guizhou Province

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Abstract: In order to promote the international development of traditional Chinese medicine in Guizhou Province, this paper summarizes the current situation and problems of the development of traditional Chinese medicine in Guizhou Province through literature analysis and case studies. The study found that Guizhou Province has abundant resources of traditional Chinese medicine and a unique industrial base, but it faces challenges such as insufficient standard docking and weak brand influence in the process of internationalization. This paper proposes an optimization path, including promoting standardized production, strengthening cultural communication, and expanding the international market. The study believes that through industrial upgrading and resource integration, Guizhou Province can enhance the international competitiveness of traditional Chinese medicine and provide support for regional economic and cultural exchanges.

Keywords: Internationalization of Traditional Chinese Medicine, Development Path, Industrial Upgrade, Cultural Communication

1. Introduction

Amid the global economic slowdown and weak international market demand, China's trade in traditional Chinese medicine (TCM) products has demonstrated remarkable resilience. According to customs statistics, in 2024, the total trade volume of Chinese medicinal products reached USD 8.39 billion, a year-on-year increase of 0.4%. Among these, exports accounted for USD 5.28 billion, representing a decrease of 3.2%, while imports stood at USD 3.11 billion, up 7.3% year-on-year. The faster growth in imports compared to exports—especially the continued expansion of raw TCM material imports—was a defining feature of China's TCM trade in 2024.

Guizhou, known as the "natural medicine treasure trove" and "hometown of Miao medicine in China," enjoys the saying "No idle grass in Qiandi, abundant magical herbs in Yelang." The province currently holds 7,317 varieties of medicinal plants, ranking second nationwide. Over 90% of the raw materials used in Miao medicine, one of China's four major ethnic medicines, are found in Guizhou. [1] However, problems such as underutilization of TCM resources, insufficient innovation, lack of integration across primary, secondary, and tertiary industries, and limited industry-driving capacity of TCM persist. As the global demand for TCM evolves, Guizhou urgently needs to establish standardized systems and distinctive brands to overcome the dual constraints of cultural differences and trade barriers. Therefore, systematically exploring the internationalization path of Guizhou's TCM sector holds dual significance for promoting regional economic transformation and enhancing the global dissemination of ethnic culture. [2]

2. Current Status of Traditional Chinese Medicine Development in Guizhou Province

2.1 Resource Advantages

Guizhou Province possesses abundant medicinal herb resources. According to the fourth national TCM resource survey, Guizhou recorded 5,323 species of wild medicinal plants and 7,317 medicinal plant resources in total. [3] By the end of 2022, the total cultivation area of medicinal herbs in the province reached 7.962 million mu, with a yield of 2.978 million tons and an output value of RMB 28.06 billion. The province has developed 33 counties with over 100,000 mu of cultivation area, 330

bases exceeding 1,000 mu, and 46 single products each covering more than 10,000 mu. Guizhou ranks first nationwide in the cultivation area of *Gastrodia elata*, *Dendrobium*, Coix seed, and *Uncaria*.

This solid cultivation foundation provides rich raw materials for the pharmaceutical industry. The province's unique geographic and climatic conditions are favorable for herb growth. Guizhou has a subtropical monsoon climate, with an average annual temperature around 16°C and annual precipitation ranging from 1,100 to 1,400 mm. The warm and humid environment promotes the accumulation of active ingredients in medicinal herbs. The acidic soil formed by karst topography is especially suitable for growing *Gastrodia elata* and *Pinellia ternata*. The area surrounding Mount Fanjing, with its large day-night temperature differences, produces high-quality *Pseudostellaria heterophylla* with saponin content exceeding the national standard by 20%. The province's mountainous terrain creates vertical climate variations, endowing Guizhou with both low-altitude warm valleys and high-altitude cool regions suitable for diverse medicinal herb production.

2.2 Industrial Foundation

Guizhou Province has a solid and distinctive foundation in TCM industry development, offering strong support for TCM internationalization. By 2022, there were 114 large-scale TCM manufacturing enterprises in the province. The industrial output value grew from RMB 15.642 billion in 2010 to RMB 29.009 billion, with a compound annual growth rate exceeding 5%. This impressive growth reflects not only the rapid development of the province's TCM sector but also its growing prominence in China's national TCM industry.

In terms of product standards, Guizhou has made notable achievements. A total of 154 ethnic medicine formulas have been included in national pharmaceutical standards. Two ethnic medicine varieties and five exclusive products have been listed in the national pharmacopeia. These milestones have significantly enhanced the reputation and market access of Guizhou's TCM products, both domestically and internationally.

The TCM industry has become one of the key pillars of Guizhou's economy, making important contributions to local development and employment. Leading pharmaceutical enterprises such as Yibai Pharmaceutical and Bailing Group have established full industrial chains that cover cultivation, processing, and marketing. These companies have developed various proprietary Miao medicine formulations, rapidly boosting their comprehensive strength.

The growing brand recognition of “Qian Yao” (Guizhou medicine), represented by Miao medicine, is becoming a defining symbol of Guizhou's TCM industry. However, challenges remain. The proportion of deeply processed products is relatively low, resulting in limited added value and weak market competitiveness. Moreover, only a small number of TCM products from Guizhou have obtained international certification, hindering their promotion in global markets. ^[4]

To overcome these challenges, Guizhou must further enhance technological innovation and quality control, elevate the industrial value chain, and drive the high-quality development of its TCM industry, thereby laying a more solid foundation for internationalization.

3. Opportunities and Challenges Facing the Internationalization of Traditional Chinese Medicine in Guizhou Province

3.1 Opportunity Analysis

With the deepening implementation of the Belt and Road Initiative, cooperation between China and countries along the route has continued to expand, bringing unprecedented opportunities for the development of traditional medicine in Guizhou. As of now, China has signed cooperation agreements with 152 Belt and Road countries. Against this backdrop, Guizhou's traditional medicine, with its unique resource advantages and cultural characteristics, is poised to gain more attention and development opportunities in the international market.

In recent years, global demand for healthcare has grown steadily, and public awareness and acceptance of traditional medicine have continued to increase. According to the World Health Organization, 170 member countries currently use traditional and complementary medicine, indicating a growing global recognition of traditional medicine. As an important component of traditional medicine, Traditional Chinese Medicine (TCM) has now spread to 196 countries and regions, with

acupuncture recognized and practiced in 113 WHO member states. This trend has created broad export opportunities for authentic medicinal materials from Guizhou, such as *Gastrodia elata* (tianma) and *Eucommia ulmoides* (duzhong). Guizhou, as a major production base for Chinese medicinal materials, boasts nearly 8 million mu (approximately 533,000 hectares) of cultivation area, with its production of *Pseudostellaria heterophylla* (taizishen) accounting for over half of the national output. These abundant resources provide a solid material foundation for the international development of Guizhou's TCM industry.

On September 4, 2019, the Guizhou Administration of Traditional Chinese Medicine signed a strategic framework agreement on international cooperation with the Australian Traditional Chinese Medicine Association. This cooperation marked a further expansion of overseas promotion channels for Guizhou's TCM industry. By cooperating with TCM institutions in developed countries such as Australia, Guizhou TCM not only gains better access to international markets but also leverages international platforms to enhance its level of internationalization and global influence.

In terms of international standards, Guizhou has also made significant breakthroughs. Tongjitang (Guizhou) Pharmaceutical Co., Ltd., under China National Pharmaceutical Group, collaborated with Tsinghua University to develop international standards for *Epimedium* (yinyanghuo), covering areas such as medicinal definition, source, technical requirements, and inspection standards.

Additionally, Guizhou annually hosts major international events such as the China International Big Data Industry Expo and the China-ASEAN Traditional Medicine Innovation and Development Conference. These platforms not only facilitate exchanges and cooperation between Guizhou and domestic and international TCM enterprises and research institutions but also offer significant advantages in promoting the export of Guizhou medicine and enhancing traditional medicine culture. These events allow Guizhou to showcase the achievements and cultural appeal of its TCM industry, attracting greater international attention and cooperation opportunities.

In summary, under the impetus of the Belt and Road Initiative, Guizhou's traditional medicine is entering a golden era of rapid development. With its rich resources, profound cultural heritage, and increasing international cooperation, the Guizhou TCM industry is expected to gain a foothold in the global healthcare market and make greater contributions to human health.

3.2 Challenges Analysis

Despite its distinct characteristics and efficacy, Guizhou's traditional medicine—especially ethnic minority medicine—has not fully realized its potential. The lack of leading enterprises in ethnic medicine has resulted in weak brand recognition, preventing the establishment of a distinct Guizhou-style traditional medicine brand system. Among Chinese medicine products rejected by Southeast Asian countries, over 60% were affected by “green barriers.” The main issues include microbial contamination, heavy metals, pesticide residues, chemical pollutants, and substandard packaging—especially excessive levels of heavy metals and pesticide residues.

Foreign countries enforce strict, sometimes even stringent, quality inspection standards for imported Chinese medicines. Many also impose ingredient-related restrictions, and various technical regulations make it difficult for Chinese medicine to obtain registration and certification abroad. In 2004, the European Union issued the "Traditional Herbal Medicinal Products Directive," which allows simplified registration for products with at least 30 years of usage history (including 15 years within the EU). However, it was not until 2012 that the Di'ao Xinxuekang Capsule was approved in the Netherlands, becoming the first Chinese herbal medicine officially registered in the EU market. To date, only five Chinese products have been registered in the EU under this directive after many years of effort [5].

Furthermore, cultural differences between countries exacerbate the challenges in exporting Chinese medicine, making internationalization even more difficult.

4. Existing Pathways and Issues in Promoting the Internationalization of Traditional Chinese Medicine in Guizhou

4.1 Current Pathways

Guizhou Province has been promoting the internationalization of traditional Chinese medicine through multiple approaches. In trade, the province focuses on exporting authentic medicinal materials

such as *Gastrodia elata* and *Eucommia ulmoides*. Enterprises such as Guizhou Bailing Group have established GMP-certified production lines, with products like Ke Sutong Syrup entering the Southeast Asian market. *Rosa roxburghii* (cili), another specialty resource, achieved over \$50 million in exports in 2023, reaching countries such as Germany and Japan.

In terms of cultural exchange, Guizhou hosts the China-ASEAN Traditional Medicine Innovation and Development Conference annually, fostering discussions between domestic and international scholars on the development and innovation of TCM. Guizhou University of Traditional Chinese Medicine has collaborated with Leeds Beckett University in the UK to launch a pharmaceutical formulation program, cultivating internationally qualified professionals for the province.

Regarding industrial park development, Guizhou Bailing has spearheaded the "large-variety TCM-led medicinal plant industry" model by establishing key medicinal herb cultivation bases such as the Bailing Eco-Park. This initiative has played a demonstrative role in poverty alleviation and the development of the health and medical industry. These efforts have formed an integrated "industry + culture + research" model for internationalization.

4.2 Existing Issues

Guizhou still faces multiple challenges in promoting TCM internationalization. Brand building remains weak, traditionally, Miao medicine has been passed down orally without systematic scientific research. Talent shortages are also significant—TCM enterprises in Guizhou generally lack sufficient research personnel, especially internationally minded, multidisciplinary professionals. In contrast, provinces like Hunan have already established comprehensive international talent training systems for TCM, while Guizhou's related academic programs still focus on traditional pharmaceutical techniques.

Marketing models are outdated. Most enterprises in the province still rely on traditional foreign trade agents, with limited adoption of cross-border e-commerce platforms. In key markets such as Southeast Asia, Guizhou lacks effective promotional networks, which contrasts sharply with Yunnan's comprehensive marketing system built around the China-Laos Railway.

The current development path lacks a complete industrial chain and urgently needs systematic improvements in quality certification, talent cultivation, and digital marketing.

5. Optimized Pathways for Promoting the Internationalization of Traditional Chinese Medicine in Guizhou

5.1 Industrial Upgrading Pathway

To promote industrial upgrading, Guizhou must strengthen its standardized cultivation system. Although the province had 8 million mu of medicinal herb cultivation in 2022, standardized bases accounted for only 9%. It is recommended to establish demonstration bases in Taizishen planting areas in Shibing County, promoting the use of the "Standardized Cultivation Techniques for Major Medicinal Herbs in Guizhou" and adopting IoT technology to monitor soil moisture and fertilization levels.

A quality testing center should be established in Qiandongnan Prefecture to apply fingerprint spectrum technology for analyzing active ingredient content. For specialty herbs such as *Gastrodia* and *Polygonatum*, refined decoction pieces that meet EU standards should be developed.

Through school-enterprise cooperation, Guizhou University of Traditional Chinese Medicine can collaborate with companies to set up joint laboratories and carry out pharmaceutical R&D. Innovation should be encouraged through the use of new technologies and processes to develop major TCM and ethnic medicine varieties. Support should be given to at least three product lines for process optimization, quality improvement, and new applications. Classical formulas and medicines with shared names and compositions should be re-developed [6].

International joint laboratories can be established in ASEAN countries to collaboratively conduct TCM research and promote its application abroad. Leading enterprises such as Dechangxiang Pharmaceutical should be supported in building intelligent production lines and enhancing drug manufacturing.

Additionally, the industrial chain should be improved with the construction of a cold chain logistics base in Zunyi, equipped with temperature and humidity monitoring to ensure product quality. Sales

channels should be expanded via e-commerce platforms. These measures will help Guizhou's TCM industry transition toward standardization, automation, and internationalization.

5.2 Cultural Communication Pathway

Guizhou can adopt multiple strategies to promote TCM culture. It can co-host an annual International TCM Culture Festival with the World Federation of Chinese Medicine Societies, inviting representatives from Southeast Asia and Europe. Establishing "TCM Cultural Experience Centers" to showcase Miao medical therapies and traditional prescriptions will enhance international exposure.

Guizhou University of Traditional Chinese Medicine can cooperate with overseas universities to jointly train international students who understand Miao medicine. The province can also produce English-language documentaries on Miao medicine for distribution on domestic and international platforms, helping global audiences better understand Guizhou's TCM culture.

Traditional festivals can be leveraged to promote TCM knowledge. For example, interactive herb identification games can be integrated into Dong folk song performances. Guizhou University of Traditional Chinese Medicine can offer "TCM + Tourism" courses to train students in bilingual herb explanation skills. Studies show that 78% of foreign tourists who experienced Guizhou's TCM culture were willing to recommend related products. This cultural communication approach effectively enhances international recognition and lays a foundation for TCM globalization.

5.3 Market Expansion Pathway

Guizhou's TCM products can enter international markets through e-commerce platforms. The province ranks among the top in medicinal herb output, with annual yields of *Gastrodia* and *Eucommia* exceeding 5,000 tons. Cross-border e-commerce platforms enable companies to directly reach overseas consumers. Businesses can open flagship stores on platforms like Amazon and AliExpress, with product pages in English and local languages, highlighting the unique efficacy and clinical cases of Miao medicine [7].

International trade fairs are key for promoting TCM. Exhibiting companies should prepare product testing reports compliant with EU standards and display ethnic cultural items like silver ornaments and batik to attract attention.

To build overseas marketing networks, companies can partner with local pharmacy chains and establish dedicated counters, following the model of Tongrentang's operations in London, which integrate TCM consultation and herbal sales.

Authorities should also establish export product traceability systems to ensure each batch of herbs can be traced to its cultivation base and processing history. This model will enhance foreign public awareness and recognition of Chinese traditional medicine.

6. Conclusion

In the context of a complex and ever-changing global economic landscape, Guizhou Province's traditional Chinese medicine (TCM) industry demonstrates strong development potential due to its unique resource advantages and rich cultural heritage. However, facing both opportunities and challenges in the international market, the Guizhou TCM industry still encounters numerous issues that need to be addressed in its process of internationalization.

Through a systematic study of the current status, opportunities, challenges, existing pathways, and issues of Guizhou's TCM internationalization, this paper proposes optimized pathways for industry upgrading, cultural dissemination, and market expansion. In terms of industry upgrading, by strengthening standardized planting systems, promoting research and development (R&D) innovation, cultivating leading enterprises, and improving the industrial chain, the Guizhou TCM industry will advance toward standardization, intelligence, and internationalization. In terms of cultural dissemination, through the organization of international cultural festivals, the establishment of cultural experience centers, talent development cooperation, and the production of documentaries, Guizhou's TCM culture will be more widely spread and gain greater international recognition. For market expansion, leveraging e-commerce platforms, international exhibitions, and overseas marketing networks will enable Guizhou's TCM products to more effectively enter the international market,

thereby meeting global health demands.

The implementation of these optimization pathways will help the Guizhou TCM industry overcome the dual constraints of cultural differences and trade barriers, build an internationally competitive brand system, and promote the coordinated development of TCM undertakings and industries. This is not only of significant importance for promoting regional economic transformation in Guizhou but also provides valuable exploration and practical experience for the dissemination of ethnic culture and the internationalization process of TCM. In the future, Guizhou should continue to deepen the implementation of these pathways, strengthen resource integration and international cooperation, and further promote the flourishing of the Guizhou TCM industry on the international stage, contributing more Chinese wisdom and Guizhou strength to the global health cause.

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