

Industrial Expansion and Brand Empowerment of Intangible Cultural Heritage Technologies Under the Background of Industrial Science and Technology ——Taking "Jiangxi Enda Linen Co., Ltd" as an Example

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ABSTRACT

Jiangxi Xinyu fenyi is known as the "hometownship of Xiabu in China". It is related to its unique ramie planting environment and cultural and historical heritage. At present, Xiabu has the highest output in Jiangxi, and as a labor-intensive industry, it relies on the development of modern industrial science and technology in China. This article explores the industrialization and branding development path of leading enterprises "Jiangxi Enda Linen Co., Ltd", excavates a new path for the inheritance of intangible cultural heritage handicrafts under the background of industrial technology and scientific and technological innovation, and puts forward inheritance strategies from the perspective of the government, enterprises, inheritors and the public.

Keywords: Industrial Science and Technology Development, Xiabu, Jiangxi Enda Linen Co., Ltd, Industrial Development, Brand Empowerment

1. INTRODUCTION

In the development process of China's modern history, Chinese society has gradually changed from the agricultural era to the industrial era. The large-scale mechanized textile production method is gradually banning non-governmental manual production. Non-governmental production is time-consuming, the efficiency is slow, and the finished products are difficult. If you want to inherit traditional intangible cultural heritage skills, you must keep up with the development of high-tech and use science to create the new combination of handicrafts and modern industrial science and technology not only improves production efficiency, but also maintains the unique skills.

Xiabu has the characteristics of ecological and environmental protection, simplicity and naturalness, and its breathability and heat dissipation, freshness and coolness, and natural antibacterial are superior to other fiber products. Nowadays, Xiabu, which advocates greenness and cultural self-confidence, is in a good development opportunity. As a leading national

agricultural industrialization enterprise, Enda has continuously carried out technical research, integrating ramie cultivation, biological degumming, Xiabu textile, printing and dyeing, deep processing and sales to create green environmental protection and high-quality hemp products. In the high-volume industrial chain, the product is positioned as a high-end home textile market, constantly innovating derivatives, and building its own unique brand. Through the exploration of its industrialization and brand development process, the experience of intangible cultural heritage technology relying on the development and inheritance of industrial science and technology is summarized.

2. XIABU INDUSTRY DEVELOPMENT UNDER THE BACKGROUND OF INDUSTRIAL SCIENCE AND TECHNOLOGY

2.1. Output intangible skills into tangible products in the form of product chains

Xiabu production technology is an intangible technology mastered by handicrafts. Ramie is used as raw material. After dozens of subdivisions, yarns, weaving and processing are produced to produce tangible products. Through the sale and circulation of products in the market to obtain economic benefits, it has potential economic value and practical value, is easy to integrate into the art market, and is suitable for Industrialization development [1]. The connection between intangible skills and tangible products not only allows intangible cultural heritage technology to open up market space, but also completes the dissemination of intangible cultural heritage cultural connotations among the audience. The development of industrial science and technology has accelerated this process. The increasing enrichment of product forms, the gradual improvement of production efficiency, and the collision of science and technology, fashion and art have increased the possibility of popularization of intangible cultural heritage skills in people's daily lives. As a national leading enterprise, Enda, under the guidance of the government, connects professional cooperatives and the majority of flaxing farmers to carry out industrialization operations, forming a complete industrial chain integrating production, sales and in-depth processing, and creating a ramie planting base, ramie microbial degumming refined dry hemp, pure hemp spinning, hemp-cotton blending, Fashionable fabrics, Xiabu bed household goods, clothing and Xiabu craft series product research and development and other chains [2].

2.2. Technological innovation to build a biological degumming refined hemp production line

The mechanism and method of ramie degumming have become a difficult problem that can't be overcome by lean hemp production enterprises for a long time. The ramie chemical degumming process is polluted, the cost is high, the degumming is incomplete, the fiber quality is damaged, and the lack of a perfect sewage treatment system hindering the industrialization path of ramie processing. Enda is the first to realize that it is asked in the century. The seriousness of the question, cooperate with Wuhan University to carry out technical research, scientific and technological innovation, and independently develop alkaline bacillus degumming technology. Microbial degumming tanks and computer automatic control equipment have been used in the

production line and have obtained a number of patents. This technology retains the natural properties of ramie fiber to the greatest extent while reducing pollution emissions, making Enda a national leading enterprise and a leading enterprise in the ramie industry.

Table 1. The situation of energy conservation

Compared with chemical degumming technology, microbial degumming technology can be reduced:	
Standard coal	9453 tons/year
Water	705 tons/year
Electricity	32 thousand degrees/year
COD	5430 tons/year

2.3. Explore low-carbon and green production methods to achieve sustainable development of ecological and healthy enterprises

Green environmental protection is a way of life that modern people continue to pursue. While the development of industrial science and technology brings environmental pollution, it also brings infinite possibilities for environmental governance. Xiabu originated from nature, and the simple and refreshing attributes are in line with people's desire to return to simplicity. Enda adheres to the principle of promoting national craftsmanship, realizing ecological health enterprises with low carbon and green, and building ecological brands. Technological innovation realizes biological degumming, reduces the chemical content of COD in sewage, avoids direct discharge of wastewater containing chemical solutions, and has a complete sewage treatment system to treat sewage into organic compound fertilizers. In the process of biological degumming, through the improvement of the design of the boiler, the grain husk is used instead of coal to produce steam, and the water film dust removal device is used to reduce exhaust gas emissions. Xiabu printing and dyeing also adopts independently developed plant dyes to achieve pure natural pollution-free. Through the transformation of the production line, the waste generated in the spinning process is also produced into pulp, plates and other products through special treatment, which indirectly reduces the use of wood.

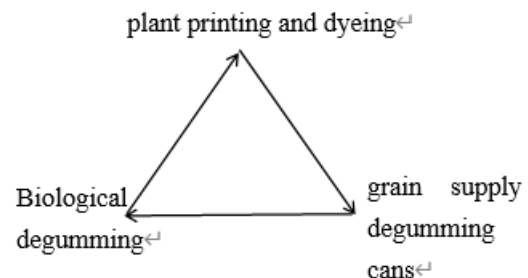


Figure 1 Ways to save energy and reduce emissions in ramie production

2.4. Create derivatives to reflect the economic and aesthetic value of intangible cultural heritage products

With the changes of the times and the development of science and technology, people's lifestyles have undergone earth-shaking changes. Intangible cultural heritage handicrafts are the product of the traditional era. Most product designs are relatively lagging behind and are easily replaced by modern homogeneous new products. The category is single, the degree of difference is small, and there is a lack of brand positioning and brand culture. Only by creating derivatives to meet the changes in the modern consumer market and aesthetic needs can we highlight the economic and aesthetic value of traditional handicraft intangible cultural heritage products. Following the tide of "national trend" and "ramie fever", with the help of the improvement of Chinese culture self-confidence, use the natural properties of ramie fiber, retain the simple, light and wear-resistant characteristics of Xiabu, and excavate the collection, decoration, function, commemoration and image value of Xiabu products for terminal product design. Collide the characteristics of the current era with ethnic elements, and now organically combine with the past. With the help of traditional hand-painting and embroidery embellish traditional Xiabu, we can make non-reproducible products in connotation and materials, and make derivatives such as clothes, shoes and socks, paintings, tablecloths, bags, scarves, bedding, folding fan surfaces, cushions, cup covers, etc. Modern lifestyle and market demand provide various possibilities for the development of intangible cultural heritage products. The collision of modern technology and traditional culture can inject new vitality into the inheritance of intangible cultural heritage skills.

3. XIABU BRAND EMPOWERMENT UNDER THE BACKGROUND OF INDUSTRIAL SCIENCE AND TECHNOLOGY

3.1. Promote brand building and development

At the beginning of 1997, Fenyi County, as the "home of Xiabu in China", is also the largest Xiabu export county in China. The export method is mainly low-cost embryos for export. After simple processing in Japan and South Korea, it is recycled at a high price in China. Domestic ramie manufacturers lack industrialization production lines and deep processing technology have worked hard to make it up. The woven Xiabu earns value that does not match the labor effort [3]. In 1998, Qiu Xinhai realized that Xiabu still had great potential value, so he began to explore the way Xiabu production and marketing integration and deep processing, and founded the Enda brand. Through the introduction of advanced

foreign equipment and production technology, we will focus on the research and development of new products and set up production lines, so that Xiabu's display methods will gradually diversify and obtain double profits. In 2002, after technical research and scientific and technological innovation, Enda cooperated with Wuhan University to independently develop biodegumming technology, obtained a number of patents, solved the huge cost and environmental pollution caused by chemical degumming, and was rated as the "leading agricultural industrialization enterprise in Jiangxi Province". Since then, Enda has forged ahead. After years of development, it has been continuously awarded the honorary titles of "Jiangxi Famous Brand Products", "National Spark Extroverted Enterprise", "National Key Leading Enterprise of Agricultural Industrialization", "Top 10 Competitive Enterprises in China's Hemp Textile Industry", "China Famous Trademark" and so on. The process from provincial brands to national brands has witnessed Enda's transformation from primary processing to deep processing. It has made continuous technological breakthroughs and scientific research, so that Enda has gradually built its brand goals, brand culture and core brand values, the combination of modern technology and traditional handicrafts, and the digging of market demand and the potential value of intangible cultural heritage products. Digging has created the Enda brand. It is also Enda's industrialization exploration, bringing intangible cultural heritage products into the public eye.

3.2. Broaden the improvement of brand image and the way to improve brand value

The brand image is affected by many factors such as brand culture connotation, enterprise business philosophy, enterprise reputation, brand marketing, market positioning, product subject, etc. From construction to development, the brand needs to go through long-term capital operation and user reputation accumulation. Especially for intangible cultural heritage brands and traditional handicrafts, in the case of low popularity, they want to integrate There will be more barriers to entering the market environment. Systematic planning of brand positioning, visualization of brand image through professional graphic design, and rapid dissemination in a modern digital way are conducive to the promotion of cultural heritage and the generation of continuous traffic. Enda adheres to the design style of "I am natural, green and healthy" and integrates ecology into the brand. The natural properties of ramie textiles are the foundation of its brand image. The key problems of biological degumming technology and printing and dyeing technology, the use of raw materials and the recycling of waste materials are the specific ways to shape its brand image. Retouching intangible cultural heritage skills and their derivatives through the production and dissemination of image materials, jointly cultivating

technical talents with colleges and universities, and holding publicity activities are all ways to enhance the influence of brands. Characteristic high-quality brand image is based on the market and plays a positive role in brand value.

3.3. Enrich brand marketing methods

In the traditional business process, brand communication is mainly word-to-mouth, with few communication channels, narrow audience, small communication intensity and slow communication speed. With the development of society, the expansion of the market scope, and the arrival of the new digital media era, the mode of communication has been completely subverted, from primitive newspapers, magazines and television to online media. WeChat, TikTok, Weibo, Taobao and other social shopping platforms are fluctuating one after another. Big data accurately calculates everyone's consumption orientation promotion products. Xiabu brand actively uses these new communication methods for publicity and strives to occupy a position in a competitive market. The production of promotional videos, H5, the establishment of websites, and the opening of digital reading rooms, blogs and official account platforms will not only interact with consumers, but also spread intangible cultural heritage.

4. BASED ON ENDA XIABU, IT PUTS FORWARD STRATEGIES FOR THE DEVELOPMENT OF NON-HERITAGE INDUSTRY AND BRANDING UNDER THE BACKGROUND OF INDUSTRIAL SCIENCE AND TECHNOLOGY.

4.1. The government strengthens macro-control, increases enterprise support, and builds cultural spaces such as intangible cultural heritage museums.

In the process of non-heritage industrialization development and brand building growth, the guidance, protection and support of the government are particularly important. The successful experience of Enda covers the maximizing the use of natural resources, geographical advantages and the effective support for government policies. Xiabu weaving technology appeared in folk art life. The traditional teaching method is to lead apprentices for the most primitive masters. Without the macro-control of the government, it is difficult for Xiabu to have the conditions and motivation for long-term development. Handmade textiles consume a lot of time and cost, and ramie cultivation is dominated by farmers. It is difficult to form large-scale production, and the market potential of Xiabu is difficult to stimulate. In the era of rapid development of science and technology,

traditional skills can easily be lost because they are replaced by modern products. The government has issued support policies to support the private economy, which can vigorously promote the value identification and industrialization of xiabu. In the face of technical problems, enterprises need the support of special funds from the government to survive in the small-scale period. The shortage of funds has always dealt a fatal blow to small and micro enterprises. It guides social capital to intervene, opens investment and financing channels, and plans the operation of the capital chain as a whole, which can accelerate industrial operation and brand building.

In addition, the government should also attach great importance to the construction of intangible cultural heritage. The establishment of museums, cultural academies and study bases can effectively create community cultural identity, gathering and dissemination, regularly hold cultural activities such as training, lecture halls, exhibitions, etc., inject energy and vitality into intangible inheritance, and shape unique literature in a subtle way. Intach the atmosphere and artistic atmosphere. The government should vigorously carry out the activity of "Intangible Cultural Heritage Entering the Campus", organize intangible cultural heritage skills competitions, so that more young people can understand intangible cultural heritage, and join the communication echelon of intangible cultural heritage. By means of modern digital media, we will do a good job in the recording and dissemination of systematic image materials, and carry out publicity and promotion in digital museums and offline museums to make non-hereditary inheritance more complete and efficient.

4.2. Enterprises strengthen technological innovation, avoid serious homogenization, and broaden sales channels

As the material form of traditional craftsmanship, Xiabu is finally reflected in the form of products. There are differences in quality and category of products. Quality depends on production skills. The optimization and improvement of traditional skills can fundamentally change the quality level of products. The improvement of technology requires technological innovation. Only by realizing industrial production on the basis of ensuring product quality improvement can we maximize the market value of products. Nowadays, there is no shortage of high-quality products in the intangible cultural heritage market, but the single style and the solidification of the form limit the development of intangible cultural heritage skills to a certain extent. Set up a professional design team to join product creation, create characteristic brands, extract cultural elements, and design innovative product derivatives, which is conducive to being effectively identified by consumers in similar products. In order to quickly promote products and brands, we should use the "Internet+" thinking and carry out

diversified marketing with the help of new media. Sales can set up WeChat malls, Taobao, Weibo, offline stores and other channels, carry out live broadcasts online, carry out cultural activities offline, and apply brand power to the market.

4.3. Inheritors and the public actively participate in non-hereditary inheritance and cultural construction, and innovate cultural communication methods.

The inheritor is a cultural heritage inheritor with rich intangible cultural heritage handicrafts and production experience assessed by the government. He should shoulder the heavy responsibility of inheriting intangible cultural heritage, abandon the traditional concept of passing on skills only on their families, and take the inheritance and promotion of intangible cultural heritage skills as their mission. According to the arrangement of the government, the inheritor shall actively participate in non-hereditary inheritance work, carry out skills training, participate in product research and development, use the core skills they have mastered, guide the innovation of handicraft products, explore ways to integrate intangible cultural heritage technology and modern science and technology, strengthen the learning of their own theoretical knowledge, and cooperate with universities and designers to jointly do a good job in the cultural inheritance of intangible cultural heritage skills on campus.

As an important part of the social and cultural ecology, the public plays an irreplaceable role in the construction, inheritance and protection of the intangible cultural heritage atmosphere. After the composition of cultural spaces such as exhibitions, pavilions and museums, the active participation of the public is still needed to play a role. Non-hereditary inheritance and cultural construction require the joint efforts of the masses.

5. CONCLUSION

5.1. Industrial science and technology help add a new path to the industrialization of intangible cultural heritage

With the development of modern industry, Xiabu's production methods have also gone through changes from pure manual production to semi-handmade production and then to mechanized production [4]. However, due to insufficient innovation, core degumming and textile links are difficult to solve key problems, most enterprises are still unable to produce Xiabu products with high scientific and technological content, high quality and high added value. At present, in China Due to cost problems, Xiabu production is still mainly purely handmade. There is less product innovation, single category, and lack of deep processing.

In the face of limitations, Enda chose to face difficulties, make technological breakthroughs, seize the opportunity of industrial science and technology development, adhere to scientific and technological innovation and green environmental protection concepts, and re-upgrade production equipment and scale. The industrial chain extends from primary processing to deep processing, and actively adapts to the market. Although its national popularity needs to be improved, in summer In the process of cloth industrialization, it is unique. Enda strives to combine product processing with technology to ensure product quality while reducing production costs, providing jobs for people with summer fabric weaving skills, and giving more young people the opportunity to join. Enda digs deep into summer cloth weaving and embroidery technology to produce with modern fully automatic mechanized and efficient production. At the same time, it sets up a studio for customers with customized needs. The designer carries out model design in the studio. The craftsman weaves it with manual sewing looms, and then uses modern textile equipment to quantify production.

5.2. Industrial science and technology empowers brand building and promotes the inheritance of intangible cultural heritage skills.

With the development of industrial science and technology and the innovation of textile materials and technologies, it is not to block the inheritance of handicrafts, but to create new inheritance opportunities. Xiabu with traditional style characteristics can also be weaved with modern textile technology. The degumming technology, spinning and knitting technology covered by Xiabu handicrafts can be optimized through industrial technology, combining Xiabu weaving technology with modern technology and fashion to create new Xiabu specifications and varieties to cater to the essence of terminal goods. Refining demand, adding inheritance momentum, promoting new fields of market economy, and providing new space for xiabu commodity innovation and application. While highlighting the color, texture and texture characteristics of Xiabu products, it retains its breathability, color and fiber tension, creates a unique Xiabu brand, explores brand advantages in the international ramie heat, and occupies a place in the market. Protect Xiabu craft and cultural resources, explore brand potential, find brand core values and cultural connotations, and carry out brand building.

To sum up, under the background of industrial science and technology, emerging technologies are emerging one after another. While bearing great pressure, the inheritance of intangible cultural heritage skills also has a new effective path. Scientific and technological innovation and the overcoming of technical problems not only promote the industrialization and brand building of intangible cultural heritage skills, but also show

intangible cultural heritage skills to the society in the form of tangible products. The potential market value of intangible cultural heritage Xiabu has improved the quality of Xiabu on the basis of retaining its original characteristics. The success of the productization and branding road of Enda is inseparable from government support, independent innovation of enterprises, and the active participation of inheritors and the public, which also provides reference experience for other intangible cultural heritage technology inheritance and intangible cultural heritage enterprises.

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