

# Research on the Tourism Factory Innovative Business Model

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**Abstract:-** The COVID-19 pandemic has severely affected the tourism market and industry, yet Taiwan's tourism factory, which has developed over many years, suffered relatively few losses during the pandemic. In fact, the customer unit price and number of establishments reached new highs throughout this era. Based on the PEST-SWOT theoretical framework and the discussion of literature on innovative business models, this research analyzes the current development direction and practical operation mode of Taiwan's tourism factory to define the business models and offer transformation suggestions that enterprises can use to transform into a tourism factory reference or serve as an existing reference for the integrity of the self-examination focus and development strategy of the tourism factory operator during the operation process. Enterprises can also use digital transformation and cross-domain value-added strategies to integrate online and offline resources, such as agriculture, culture, and tourism in the region, and link regional revitalization or ecosystem circular economy effects. The tourism factory with local economic and humanistic historical characteristics present the development background and evolution of the local industry and offer unique cultural values. These are the bases for innovative business models, making Taiwan's tourism factory very competitive as an international tourism brand and one of the successful innovative business models.

**Keywords:-** Tourism factory, PESTLE & SWOT Analysis, Innovative business model.

## I. INTRODUCTION

### A. Research Background

In the ever-changing global economic environment and Taiwan's economic development, small and medium-sized manufacturing enterprises have always played an important role because the government's relatively slow adjustment to development policies and related regulations has resulted in the weakening of traditional manufacturing. In order to survive, these enterprises have chosen to develop abroad, resulting in Taiwan's deteriorating industrial competitiveness. However, in order to survive and ensure sustainable development, enterprises in Taiwan must continue to innovate and transform. At the same time, the quality of life of the Chinese people has gradually improved, leading to a growing demand for tourism in the leisure industry.

Taiwan has long focused on small and medium-sized enterprises (SMEs). In 2003, the Industry Development Bureau (IDB) of the Ministry of Economic Affairs (MOEA) proposed the "Plan for Promoting the Development of Tourism and Leisure Industry in the Manufacturing Industry." Two years later, it developed further with the "Plan for Promoting Innovation, Transformation and Development of Local Industry." Such efforts continued to promote the "factory transformation and upgrading and technological advancement promotion plan," with the goal of guiding potential and willing entities to develop tourism, assist in the innovation and development of the manufacturing industry, and ultimately cultivate them to become a "tourism factory." Through the industrial tourism of the "tourism factory," the public as well as school groups can experience and learn from leisure and enriching activities, thereby increasing the promotion of industrial education and tourist attractions while also driving the mobility of local tourism resources, which can be transformed into a driving force for economic growth by increasing the use value of the original industry, factory land, and buildings. Implementing this plan will drive the local industry and the surrounding related tourism resources, and moving lines will be integrated from the tourism factory to create a comprehensive business opportunity for the local tourism and leisure industry, creating a win-win benefit for manufacturing and service (MOEA, 2020).

Since the emergence of the global COVID-19 pandemic starting at the end of 2019, the global tourism industry has been sluggish. Countries throughout the world have implemented stricter border controls. Taiwan completely banned foreign tourists from entering the country, and the related industries were deeply affected. Meanwhile, 10 million domestic tourists created a booming domestic national tourism market, making the tourism factory's industrial sightseeing and experience tours more popular with tourism and consumers. As a result, based on the performance and number of visitors, the tourism factory, which has been developing for more than 19 years, broke new highs during the pandemic. In response to the severe situation of various pandemics and epidemics in the future, in addition to the government's publicity and strict implementation of epidemic-prevention policies, tourism factory operators must also deploy their own strict epidemic-prevention measures in advance so that travel agency operators and consumers can have peace of mind when traveling.

### B. *Motivation for and Purpose of the Research*

Existing research has tended to discuss various services and marketing of the tourism factory from the marketing experience perspective or by focusing on the transformation of factories and enterprises. The current research explores how Taiwan's tourism factories have followed the world's industrial development trends while Taiwan's government has guided innovation strategies and continuously evolved and innovated business models. The study explores the overall expectations and services that can optimize or meet the expectations of tourism operators or consumers, thereby deepening consumers' loyalty to corporate brands and enhancing corporate image.

## II. LITERATURE REVIEW

### A. *Tourism Factory*

The conceptual model of "tourism factory" stems from idea of "industrial heritage tourism," which has been developed abroad. According to Xie (2006), industrial heritage is known as a "nostalgic landscape" in which the former rust belt has been transformed into a valuable asset for revival. The tourism industry has increasingly developed and promoted former industrial zone facilities as a useful tool for regional restructuring and economic development. Industrial heritage tourism refers to man-made sites that originate from early industrial processes, tourism activities in buildings and landscapes, and the development of the related industry. The subject of industrial heritage includes the material remains of industry, such as sites, buildings, factories, machinery, and equipment. Industrial heritage also includes housing, industrial settlements, industrial landscapes, products and craftsmanship, and documents of industrial societies. Halewood and Hannam (2001) defined industrial heritage tourism as the integration of declining industrial sites into tourism elements, leading to the development of a historical and cultural tourism industry. Industrial tourism is not just heritage tourism, but also has cultural, architectural, historical, and religious aspects. Eventually, cultural tourism also emerges, which looks forward to improving the old local image and eliminating traditional prejudice in order to raise the awareness of local residents. Hiroshi Suda (2002) believes that industrial tourism is the use of industrial cultural resources with high historical and cultural value (such as machinery or factory sites), production sites (factories), and industrial products as tourism elements to enrich the purpose of people's communication. In the foreign literature, the concept of a tourism factory first appeared in Roald's (1964) novel *Charlie and the Chocolate Factory*, which explained the tourism model of factory visits in a fairy tale way (Liu & Chen, 2016). In Japan, the phrase "factory visit and study" is used to describe the type of factory tourism that combines manufacturing with tourism (Chen, Yang, & Lin, 2011). Its development and operation methods differ from those of Taiwan's tourism factory. There is no government oversight or uniform evaluation standards. Therefore, all tourism factories in Japan develop their own service items, such as experience fields and processes, resulting in large differences in service content.

Although the concept of Taiwan's tourism factory is similar to that of international industrial heritage tourism and Japanese factory tours, it has evolved into a tourism factory model involving a small-scale single enterprise due to the relatively different scale and development area of the domestic industrial environment. Industrial heritage tourism has been exhibited abroad for decades and, in response to tourism and local revitalization needs, it has gradually developed into a new local characteristic culture and experience of the tourism business mode, which focuses on using abandoned industrial plants. In the process of reconstructing an area, in addition to retaining and revitalizing the spirit of the original corporate culture, this approach to tourism also combines local characteristics of humanities, arts, crafts, agricultural products, and scenic spots (Qiu, 2012). In recent years, some domestic enterprises whose production scale has decreased, such as Taiwan Tobacco and Liquor Factory, or whose production is not profitable, such as the cement mining industry, have also adopted transformation methods. The renovation and regeneration of traditional factories or decommissioned sites that have declined or are about to decline by incorporating the elements of the tourism perspective and value-added design while also adding local characteristics and creating a new and eye-catching in-depth tourist attraction also bring about a new industrial tourism form to the traditional scenic tourism industry.

### B. *Definition of Taiwan's Tourism Factory*

The "Key Points of Guidance and Evaluation of Tourism Factory" produced by the Ministry of Economic Affairs of Taiwan promotes cooperation with the policy of service-oriented manufacturing by introducing a composite business model of manufacturing and services and assisting traditional factories in transforming to tourism services, mainly in accordance with Article 9 of the Industrial Innovation Regulations (2019) and Article 26 of the Factory Management Guidance Law (2019). These documents indicate that Taiwan's official tourism factory refers to "a factory that has obtained factory registration, has industrial culture, educational value or local characteristics, is actually engaged in manufacturing and processing, and provides its products, processes or factory sites and factories for tourists to visit and rest." According to the "Factory Transformation and Upgrading and Technology Advancement Promotion Plan," through the industrial tourism development of a tourism factory, general consumers or school groups can experience and learn from leisure and enriching activities, resulting in increased industrial education promotion and tourist attractions. Such efforts can also drive the mobility of local tourism resources, transform them into a driving force for economic growth while relatively increasing the use value of the original industry, factories, and buildings. The implementation of this plan is expected to drive the linkage effect of various local industries, integrate the surrounding related tourism resources and moving lines, and create comprehensive business opportunities for the local tourism and leisure industry from the tourism factory, creating a win-win benefit of manufacturing and service (MOEA, 2019).

In 2003, the IDB and the Central Region Office of MOEA promoted the "Plan for Promoting the Development of Tourism and Leisure Industry in the Manufacturing Industry" and entrusted its implementation to the Industrial Technology Research Institute (ITRI) in order to continuously optimize the tourism service content of the tourism factory industry and respond to the trend of international in-depth experience tourism. Taiwan has promoted the selection of an "Excellent Tourism Factory" since 2009 and an "International Highlight Tourism Factory" in 2013, and in 2022 it established the "Tourism Factory Exemplary Award" (MOEA, 2022). In addition to applying for tourism factory evaluation and approval, enterprises can participate in the evaluation of the two previously mentioned selections. If an enterprise continues to achieve the "International Highlight Tourism Factory" requirements, it will be able to receive the "Tourism Factory Exemplary Award" to recognize its lifetime achievement in the tourism factory. The tutoring unit ITRI will conduct joint promotion and marketing for verified tourism factories and implement various tutoring and value-added promotion plans in accordance with the development direction of the government. In addition, this plan provides enterprises with references for the transformation of old and idle factories and clearly recommends software and hardware construction projects that support the tourism factory.

The "International Highlight Tourism Factory" selection is based on the Industrial Transformation and Upgrading Plan of Agglomeration Industry in Specific Regions (2019), which aims "to attract international tourists to Taiwan by combining local tourism and cultural resources, and to strengthen the international competitiveness of Taiwan's tourism factories and enhance the tourism connotation sophistication and richness through regional tourism and by connecting surrounding scenic spots as a comprehensive construction to expand the value network; by planning a variety of package tour itineraries, setting the tourism factory as the focus 'point' of the tour, that combine nature, industry, education, and different themes such as art and humanities packaged together into a series of complete tourism 'lines' to meet the needs and attributes of tourists; and by enhancing the unique value and attractiveness of local characteristic tourism as a whole, creating an industrial aggregation effect. Let tourism factory be the industrial platform for knowledge sharing, gradually integrating relevant resources such as industry, education, and technology application, facilitating cross-border exchanges, and extending the desired image to international visitors, media promotion operations, public welfare activities, community participation and even local festivals. Create word-of-mouth rendering power based on breadth and depth, expand brand awareness around the world, and open up new business opportunities for development."

Considering the "Excellent Tourist Factory" as an example, the evaluation project can explain the fundamental conditions and characteristics of the tourism factory, including six major tourism factory evaluation elements: the theme of the tourism factory, factory planning and service facilities, facility display, service quality, operational performance, and corporate social responsibility. The highest level of the "International Highlights Tourism Factory" emphasizes specific considerations, including target customer groups and brand marketing. It has a clear international target customer group and marketing model. Experienced tour products have international certification and can be sold in domestic and foreign markets. They set up passenger service counters, establish international professional reception service standard operating procedures, and provide instant multi-language (Chinese, English, Japanese, Korean, etc.) consultation and guide services. The regional industrial linkage benefits can effectively connect adjacent international tourist attractions and service facilities (restaurants, night markets, historic sites, etc.) to form a tourist cluster and provide a variety of packaged itinerary services that enable visitors to participate in international exhibitions, local festivals, and tourism exhibitions and other activities.

### III. PARTICIPATION AND TOURISM FACTORY PEST–SWOT INDUSTRY ANALYSIS

#### A. *PEST Industry Analysis*

This research discusses and analyzes the current development status of tourism factory operators based on government regulations and counseling programs and corresponding to the theoretical basis of the PEST–SWOT model analysis. It then discusses four aspects and nine elements of innovative business models one by one, ultimately presenting an innovative business model for Taiwan's tourism factory (Figure 1). Many models can be used for developing enterprise innovation or transformation. The business model of a tourist factory can be analyzed using the PEST–SWOT model to fully explore the origins and transitions of the entire tourism factory in the overall environmental development of Taiwan. The PEST model analysis, first proposed by Aguilar (1967), analyzes political, economic, social, and technological factors in the overall environment. This is also part of an external analysis when doing market research, which can give a tourism factory an overview of different factors in the general environment. This strategic tool can help effectively explain the growth or decline of tourism factories in the market by considering various conditions of the environment as well as future potential and operational directions. Armstrong (2006) believes that combining the PEST model analysis and external environment factors can help summarize the opportunities and threats in a SWOT analysis. After comparing and discussing them one by one, they can be used as an enterprise and environmental analysis tool, resulting in important reference information for business management and transformation strategies.

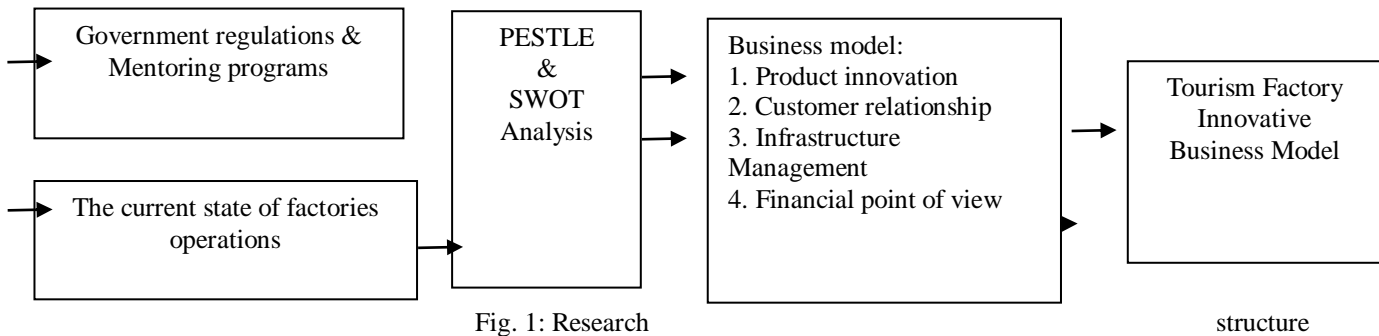


Fig. 1: Research

structure

Since the development of PEST analysis, different needs have arisen in response to environmental changes of the times, so there are more aspects and factors to be discussed, such as a SLEPT analysis with added legal aspects, a SPENT analysis with added natural/environmental considerations, and a STEEPLE analysis considering ethical issues that can be flexibly adopted depending on the specific corporate issues. This research further discusses the content of the PESTLE analysis, which includes summarizing and explaining six discussion directions (Xie, 2015).

- The political factor is used to evaluate the "interference degree" of a country's political power on the economy, especially when the country deliberately supports or regulates certain industries, such as energy, environmental protection, education, transportation, and other public power undertakings. This factor considers tax policy, labor laws, environmental regulation, trade restrictions, tariffs, political stability, etc. In the transformation and development of traditional factories in the past few years, government policy guidance has played a very important role in promoting many guidance regulations and plans, such as the Industrial Innovation Regulations, the Promoting Cross-domain Innovation and Value-Added Plan for Small and Medium-sized Enterprises, and the Industrial Transformation and Upgrading Plan of Agglomeration Industry in Specific Regions. In Taiwan's tourism promotion policy, due to the development of consumption trends such as industrial tourism and in-depth experience tourism, tourism factories are also included in the marketing of domestic and foreign tourism markets. In terms of cultural policy, because enterprises and tourism factories have been operating in the local area for many years, they have come to play the role of museums' local cultural characteristics. In terms of agricultural policy, tourism factories have become an important base for the processing and production of special agricultural products as well as one of the key platforms for developing Taiwan's agricultural leisure tourism and community building. In both urban and rural areas in Taiwan, which are characterized by a low birthrate and an aging population, tourism factories also play one of the key roles in revitalizing the economy and generating prosperity in the creation of places and the balanced development of urban and rural areas. Land sales activate the local integrated and profitable business model. In the promotion of Taiwan's education policy, because the tourist factory is an experience field with

both industrial culture and production technology knowledge, it provides more and more interesting industrial knowledge and professional and technical education guided tours in addition to school textbook theory. It is also the safest place for career exploration, professional knowledge, and technology visits and learning among high school and college students.

- Political trends on both sides of the Taiwan Strait also affect the prosperity and decline of tourism factories in the Kinmen area. More than 20 years ago, China's and Taiwan's cross-strait "Mini-Three-Links" and the open tourism policy created the Kinmen tourism-related industry and the gift industry. Due to the pandemic-related border control and China's one-sided blocking policy, all tourism industries in the Kinmen area have plummeted, and the Kinmen tourism factory operators have had to abandon the original shopping trips with large numbers of mainland tourists and other visitors, instead relying on small group tourists and individual tourists in Taiwan. From May to September 2021, the pandemic-related restrictions have become increasingly stringent in Taiwan. In addition to the continuation of the 2020 relief and subsidy measures, the government has allowed tourist factories to apply for wage subsidy measures when their buildings are closed and has provided national revitalization coupons and extra coupons such as "delicious food coupons," "national travel coupons," and "agricultural tourism coupons" to stimulate public consumption. Tourism factories have also slightly eased operating pressures because of various overweight coupons and revitalization coupons. Because the pandemic has blocked opportunities for international marketing and field experience for tourism factories through international marketing promotions by foreign students who come to study in various universities in Taiwan, the tourism factory has cooperated with universities in both industry and academia, allowing foreign students to go into various fields. Through experiences and internships, foreign students use their native language to make micro-videos or short text photos and share the actual situation of marketing experience via social media in their home countries, which is also a form of international marketing. Through more in-depth experiential activities, foreign students can make various activities more internationally oriented. Through university–industry cooperation, students can also produce proprietary promotional videos, precise digital marketing tools, and unique aesthetic designs for each field.



- Economic factors indicate that economic and market development is the most important factor affecting corporate strategies. For example, the economic prospects of a region will determine the size of the future market, and exchange rate changes will affect import and export costs. Items for consideration include economic growth rate, people's income, market development trend, interest rate, and inflation, which is the most important reference for corporate strategy formulation. The steady development of Taiwan's economy, the growth of people's income, and improved quality of life have created a substantial increase in the demand for and quality of leisure, tourism, and catering services. In recent years, it has also contributed to the establishment of tourist factories, the number of tourists visiting the factory, and the income performance. Although the COVID-19 pandemic has greatly affected economic development and the tourism industry in the past two years, the government's subsidy and revitalization measures for tourism factories have prevented tourism factories from closing due to excessive losses under strict pandemic control regulations. During the pandemic-spurred slowdown and the rapid development of domestic tourism in Taiwan, even more business operators have enjoyed significant growth in their performance and hit new highs. However, during the pandemic, the foreign tourism market has become stagnant due to border controls and strict controls related to the domestic pandemic, resulting in the stagnation of foreign tourism and inbound tourists in the past two years. Although the domestic tourism market has been sluggish, the travel agency industry and hotel industry in the international tourism market, the catering industry, and the tour bus industry, are losing money, causing many tourism-related businesses to close down, lay off employees, adjust their business operations (e.g., online e-commerce), or develop other domestic special sightseeing experiences and in-depth tourism of new attractions. Because people travel abroad for sightseeing tours every year, the leisure mode must be shifted to focus on domestic tourism or consumption. Therefore, various travel agencies have re-developed more high-priced and high-quality Taiwan tourism highlights and new itineraries. Tourism factories have also become the highlight of a wave of Taiwanese sightseeing experiences and in-depth tourism. During this part of the pandemic, because of the inability to participate in physical consumption in public, the home economy and online shopping consumption patterns have grown strongly, and tourism factories have also adjusted their business and sales directions, using digital transformation and cross-domain value-added strategy through different social media and online shopping platforms to develop online shopping, direct purchase group purchase options, and online experience DIY tour sales.
- Social factors not only affect product demand and the way companies operate, but also lead companies to adjust their management practices and systems for social factors. Items to be considered include cultural tourism

perspectives, health awareness, population growth rate, age structure, safety needs, and quality of life. Advances over time have enabled consumers to enjoy beautiful tourist attractions while also acquiring more life knowledge and enjoying themselves during travel and leisure times. Tourism factories are suitable opportunities for promoting such age-free knowledge experiences. In addition to slowly changing the sales and service model due to the extension of the pandemic, tourist factories must also respond to changes in the international travel market and customers' online service needs. All products and services must also keep up with consumers' living standards and sustainable development needs, such as healthy and pollution-free experiences. In addition to meeting demands for a friendly environment with convenient online shopping, the industry must gradually incorporate the planning and implementation of social corporate responsibility, implement localized operations to support local industry, ensure the social care and protection of vulnerable groups, and give back to the village by hiring local people and females. Tourism factories must also appropriately preserve and activate industrial cultural assets, such as the preservation and display of industrial history and cultural relics.

By the beginning of 2020, COVID-19 infections had expanded around the world. The severe global pandemic closed Taiwan's borders, causing heavy losses to the country's tourism-related industries (e.g., aviation industry, hotel industry, online and offline travel agency industry, tour bus industry, large-scale tourism industry, restaurants, tourist attractions, tourist factories). The government immediately launched relief measures, such as the exemption or reduction of business taxes, reduced bank loan interest, and the use of education and training hours for tourism practitioners to take advantage of salary subsidies. As a result, enterprises could retain existing employee resources and reduce social impacts caused by layoffs. Tourism factories became one of the most in-depth experience areas for tourism practitioners, becoming one of the biggest beneficiaries in terms of performance revenue and number of visitors. The pandemic caused companies to start thinking about transformation and breakthrough strategies. They must constantly adjust and integrate various resources. In addition to allowing companies to continue to survive, they also expect to create the maximum benefits. Therefore, cross-domain value-added integration cases such as the Taiwan Tourism Factory Promotion Association, the National Federation of Travel Industry Business Associations, and the National Federation of Tourist Bus Passenger Business Associations jointly mobilized mutual support and created a joint cross-border action involving one million visitors. During the pandemic, the aviation industry shifted passenger planes to cargo planes, and the freight volume of early-stage pandemic prevention supplies and follow-up technology products increased greatly. The hotel industry transformed into anti-pandemic hotels or shifted business directions to strengthen anti-pandemic management for healthy or in-depth experience tourism with local characteristics and even premium meal delivery services.

Online travel agency operators adjusted their international travel service projects and focused on comprehensive domestic tourist attraction (e.g., outlying island) itinerary development and online shopping and ticketing businesses. Inbound travel agencies adjusted their businesses to develop in-depth domestic tourist experiences, developing exquisite and characteristic tours with higher quality and at higher unit prices. As a result, domestic tourism became one of the main factors contributing to the increase in the revenues of tourism factories and the number of visitors during this period. Meanwhile, large restaurants and tourist attractions made relatively few adjustments and experienced little benefit, so their losses are relatively serious.

- Technological factors refer to the cost, quality, and R&D innovation that affect the operation and management costs as well as the quality and R&D innovations of the company's business and tourism factories, especially in the establishment of barriers to market entry, process efficiency, and outsourcing decisions. They include items such as R&D activities, wisdom automation, technological incentives, and speed of technological development. The fiercer competition in the industrial globalization market and the shortage of human resources due to the low birth rate in Taiwan have become one of the major issues that must be solved in the operation of enterprises. The introduction of digital smart technology is one of the most effective methods. The tourism factory itself and the experience field, under the government's guidance and promotion policy, the development trend of digital technology, and the improvement of enterprise customer service and tourism service quality, must gradually introduce digital management service technology to design customer experience services. With the changes in shopping and travel patterns, borderless digital marketing and e-commerce operations that provide more brand story knowledge and life aesthetic design are indispensable business thinking and strategies for enterprises and tourism factories in the market competition. In the future and in light of the possibility of an ongoing pandemic, it is important to determine how tourism factories that rely on on-site interactive experience and ritual sense that add value can continue to grow and reach new heights. The key to success is to provide an all-round metaverse as an online digital experience field and convenient online shopping experience. Consumers must be able to continue the ritual sense of the original physical experience and successfully shift to the online virtual field for immersive experience and play. Through social marketing and KOL marketing that create topics and increase network traffic, the number of visitors to the tourist factory offline experiences will increase and online shopping services will demonstrate improved performance.
- Legal factors refer to legal issues related to the operation of tourist factories due to the evolution of time. They consider industrial innovation regulations, factory management guidance law, fire protection law, consumer protection law, labor law, and various tax laws. There are

some pseudo-tourism factories in Taiwan, which refer to fields that have not been certified and licensed by the Industrial Technology Research Institute and the Bureau of Industry yet use the name of tourism factories to attract business. Because the content and quality of services of pseudo-tourism factories are different, tourists and travel agency operators often complain about them. This can also generate consumers' wrong impressions of tourist factories. Therefore, the government is expected to set up punitive regulations to protect the names of tourist factories and deter and punish illegal operators who misappropriate them. In addition, because a tourist factory is an enterprise that coexists with production and tourism, it must face both the management regulations related to industrial production manufactured by the enterprise and management-related regulations of the tourist factory tourism service. Some discrepancies still exist among regulations, such as related to the front store. In the future, the government can hopefully set up a special legal protection standard for the development of tourism factories to keep pace with the times so that the development of tourism factories can be improved and Taiwanese tourism factories can become more successful as one of the highlights of Taiwan's industry in the world.

- Environmental factors refer to the fact that the government and consumers attach great importance to the issue of environmental protection and energy, so enterprises must consider such efforts when establishing business and transformation strategies. These factors can refer to the interactive impact of various activities, service products, and business behaviors of tourist factories on the external environment or other industries. Items considered include environmental pollution, green electricity energy savings, carbon reductions and service, and sustainable development as well as activity planning, service process, and product design. Corporate social responsibility (CSR), ESG, and the United Nations' sustainable development goals (SDGs) have also been gradually introduced into the evaluation and development focus of tourism factories to, for example, strengthen practices of environmental protection and sustainability, such as green buildings, energy savings and carbon reduction, and wastewater and waste treatment. The government promotes the certification of environmental education fields so that tourist factories can provide environmental education courses to consumers through the environmental protection strategy and planning accumulated by the enterprise itself over the years in addition to providing environmental education courses to consumers after re-examining the environmental protection resources of the enterprise, such as GuoYuanyi Pastry Museum and the Chiayi Winery factory. Sustainable tourism means that all tourism activities should have the least impact and loss on the economic and social environment while bringing the most economic benefits and feedback to local tourist destinations. As a part of the tourism industry, tourism factories should also actively improve efforts that match environmental needs.

*B. SWOT Industry Analysis*

Wehrich (1982) developed the SWOT matrix. A SWOT analysis, also known as a strong and weak crisis analysis, pros and cons analysis, and Dawes matrix, is the simplest strategy or marketing analysis method to get started. A SWOT analysis is mainly used to analyze the competitive advantages and disadvantages of the company itself as well as the opportunities and threats the company faces from the industry market and competitors. The SWOT analysis helps

understand the process of understanding the enterprise itself and the competitors from the perspective of the environmental market, enabling the enterprise to analyze and evaluate the internal and external environmental conditions at the same time and then develop a corresponding strategy method (Table 1). Finally, a cross-analysis defines the key to winning and countermeasures to implement.

Strengths within the company(S)	Weaknesses within the company (W)
<ul style="list-style-type: none"> <li>* Can re-optimize corporate history, philosophy and brand value.</li> <li>* Add new services to innovate business models, increase revenue.</li> <li>*Can optimize the field functionality and overall field aesthetics.</li> <li>* Convert from the perspective of the producer to the perspective of the server, and provide service quality to create product value.</li> </ul>	<ul style="list-style-type: none"> <li>* Non-service-oriented factory positioning, there is a gap between customer service satisfaction thinking and execution.</li> <li>*There are hardware space development restrictions in the tourist factory space in the venue.</li> <li>* For non-main core projects, the operator has little willingness and amount of investment, or adopts a mentality of walking and watching.</li> <li>*There are no professional store management services or travel business development staff in many companies.</li> </ul>
External opportunities to company (O)	External threats to company (T)
<ul style="list-style-type: none"> <li>*Have the assistance function of local industrial characteristics, cultural tourism and local creation fields in the region.</li> <li>*Public departments in various fields have relevant policy guidance support.</li> <li>*During the epidemic, the border was closed, which made national tourism boom. *At present, experience tourism and in-depth tourism are the mainstream of tourism.</li> <li>*Can become a recommended field for outdoor education and career exploration</li> </ul>	<ul style="list-style-type: none"> <li>*There is no formal legal protection. *Affiliated to the Bureau of Industry, not under the jurisdiction of other public sectors.</li> <li>*The number of non-verification sites that are illegal or borrow the name of "Tourism factory" continues to increase, and there is no law to strengthen control.</li> <li>*More tourism-oriented fields have also begun to imitate business content to win tourists</li> </ul>

Table 1: Tourism Factory SWOT Analysis

Source: Compiled by this study

After Dyson (2004) developed a SWOT strategy analysis to examine internal and external situations of an enterprise, a further strategy matrix method was used for cross-analysis and discussion, as shown in Table 2. The strategy analysis in the four directions is as follows:

- SO positive strategy: The internal strengths (S) the enterprise faces in terms of external opportunities (O), using its own advantages as much as possible when external opportunities arise.
- WO improvement strategy: The company's internal weaknesses (W) that are faced in external opportunities (O), which are used to actively improve its own weaknesses.
- ST buffer strategy: In considering internal strengths (S) and external threats (T) of the enterprise, it should use its

own advantages to reduce the loss of external threats.

- WT defensive strategy: When the weakness (W) within the enterprise faces external threats (T), it should reduce its exposure to the weak and avoid sources of external threats and seek new opportunities.

	Strengths within the company(S)		Weaknesses within the company (W)
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External opportunities to company (O)	SO positive strategy	WO improvement strategy
	<ul style="list-style-type: none"> <li>*establish your own unique successful business model for in-depth industrial tourism.</li> <li>* Cooperate with the promotion of the government's tourism and national policy promotion, and participate in relevant publicity activities of the public sector to rapidly increase brand awareness.</li> <li>*There are many consumers who are unable to travel abroad due to the epidemic. They should actively promote and market their own in-depth experience sightseeing tour projects, and cooperate with the tourism industry to achieve better results.</li> </ul>	<ul style="list-style-type: none"> <li>*Because of space limitations, it is impossible to flexibly adjust to match the total number of tourists and space capacity.</li> <li>*Because the Bureau of Industry is the competent authority, it is easy to be ignored by other ministries and associations. It is necessary to actively seek effective support or guidance from resources from other non-competent ministries and associations through public associations.</li> <li>* Actively recruit service professionals to do a good job in field service management and business docking with the travel industry, and strive to promote marketing. Operators need to change their business thinking and business staffing</li> </ul>
External threats to company (T)	ST buffer strategy	WT defensive strategy
	<ul style="list-style-type: none"> <li>* Cooperate with the government's various subsidy policies and counseling programs to continuously optimize the enterprise's constitution, maintain competitiveness, and reduce the external risks and threats of independent development.</li> <li>*Because of the development of experience products, festive gift boxes, and the establishment of online and smart marketing, it can cooperate with the rise of the home economy or during the epidemic, and quickly transform to strive for direct online shopping and group buying performance.</li> <li>*Because of the continuous optimization of experience itinerary design and the quality of tour guide services, it can retain its uniqueness and cannot be easily replaced when it encounters competition from other tourism fields.</li> </ul>	<ul style="list-style-type: none"> <li>*Complete legal management (fake tourism factory) through legislative channels through public opinion representatives.</li> <li>* Urge the government (Industry Bureau) to step up measures to persuade or ban illegal fake tourism factories.</li> <li>*Through communication with the public association, it is directly recommended that the application of the fake tourism factory be adjusted to be legal.</li> </ul>

Table 2: Tourism factory SWOT cross analysis table

Source: Compiled by this study

#### IV. DEVELOPMENT STATUS OF TOURISM FACTORIES

Because tourism factories are re-evaluated by the government every three years, as more tourism factories are established, the industry must improve the quality of serving customers and consumers to create higher performance in order to continue improving and optimizing their experience services and content, such as "unique theme, friendly space, corporate image, experience facilities and service quality." In this way, they can present satisfactory services that meet the expectations of consumers seeking innovation and change, attracting consumers who then publicize their satisfactory experiences on their own social media. One method for gathering feedback from customers is satisfaction surveys. Therefore, this study considers tourism revenues, number of visitors, and number of homes of Taiwan's tourism factories from 2012 to 2021 (see Table 3). The data indicate that, in the past ten years, Taiwan's tourism factories have shown substantial growth in terms of tourism revenues, number of visitors, and number of establishments. In particular, in the past three years during the pandemic, ten tourism factories were established in 2020, and the number

of visitors only slightly declined (i.e., by about 10%). In 2021, due to the government's travel restrictions that lasted nearly five months, the annual number of visitors dropped sharply by about 6.5 million (34%), yet five new tourism factories were established, with the total number of establishments reaching 161 factories. Such growth represents the transformation and development direction of Taiwan's manufacturing industry in tourism factories. In times of uncertain economic conditions, not only was this industry not seriously affected, but it also experienced an important implementation and reference direction for enterprise transformation. Between 2018 and 2021, a comparison of which highlights the pre- and post-pandemic world, the annual visitor expenditures decreased by about NT\$7.3 million, but the annual tourism revenue was almost the same, meaning the unit price per customer increased by about NT\$140 (Table 4). Because of the high unit price of consumption that cannot travel abroad and tourist factories continuing to improve the experience value, consumers are willing to stay and spend more at tourist factories, which meant tourist factories experienced fewer losses during the pandemic.

Annual	Tourism income (NT\$)	number of visitors	number of factories
2012	2.00 billion	10.00 million	85



2013	2.30 billion	12.00 million	109
2014	3.32 billion	16.60 million	119
2015	4.00 billion	22.00 million	131
2016	4.60 billion	22.10 million	133
2017	5.06 billion	23.00million	135
2018	4.70 billion	19.88 million	136
2019	5.20 billion	21.00 million	146
2020	5.09 billion	19.00 million	156
2021	4.71 billion	12.54 million	161

Table 3: Tourism revenue, number of visitors and number of tourism factories

Source: Compiled by this study&amp;ITRI(Industrial Technology Research Institute)

Annual	Tourism revenue(NT\$)	number of visitors	unit price per customer
2018 (before COVID-19)	4.70 billion	19.88 million	NT\$ 236
2021 (COVID-19)	4.71billion	12.54 million	NT\$376
Difference	NT\$ +0.01 billion	-7.34 million	NT\$ +140

Table 4: Tourism revenue, number of visitors and unit price per customer of the tourism factory

Source: Compiled by this study (unit price per customer = tourism revenue / number of visitors)

## V. CONCLUSIONS AND RECOMMENDATIONS

In 2021, the number of tourist factories continued to grow, and the business model transformed and innovated the manufacturing industry in recent years. All elements are integrated to form a complete, highly efficient operating system with unique core competitiveness. It not only meets customer needs, but also realizes the value of all parties (including customers, employees, partners, shareholders, and other stakeholders) while enabling the system to achieve the overall goal of sustainable profitability. Osterwalder and Pigneur (2010) presented the business model architecture in the form of a nine-square grid, known as the Business Model Canvas, which includes target customer groups, value propositions, channels, customer relationships, revenue streams, key resources, key activities, key partners, and nine elements of the cost structure. Dubosson, Ostrwalder, and Pigneur (2002) proposed four aspects of business model architecture: product innovation, customer relationship, infrastructure management, and financial aspects. Business model innovation is how an enterprise organization creates, transmits, and obtains value by using new means and new methods. The key to a successful innovative business model can be summarized into four characteristics of self-evaluated projects: they can be continuously operated, can be profitable, can be scaled, and must be executed by the right executive team.

### A. Digital Transformation and Cross-domain Value-added

Facing a declining birthrate, a shortage of human resources, and the competitive trend of improving service quality, digital transformation as a business reform topic has attracted global industry attention in recent years. Technology can improve management efficiency while reducing enterprise costs and even develop innovative process products and business models to improve the profit target of the enterprise, which traditional industries will require in the face of international competition and sustainable development. Digital transformation refers to "using innovative technology to change existing business or

operation models to create new value and sustainable business advantages." The three keys to digital transformation are digital technology, customer experience, and business models, but such transformation cannot be achieved overnight. Basically, it is necessary to rely on customer service, provide customers with the best consumption experience, and gradually transform through the strategy, tools, and culture that completely connect the front, middle, and back office services of the enterprise (Ye, 2019).

Due to the impact of the pandemic, physical production and sales models have changed, thereby accelerating the digital transformation and development of enterprises. Digital strategies and investments are imperative. In addition to short-term responses, long-term strategies and tactics are required, especially for those with limited resources. For SMEs, it is even more important. Only when companies understand what they need can they know where they want to transform. In the process, it is not enough to simply import digital tools. Different elements need to be combined and realized together (Ou, 2021).

In order to solve the pain points of human resource shortages and service training gaps in tourism factories, it is necessary to use digital intelligence technology to enhance on-site tour guide business development, customer service experiences, operation management, and business performance. Interactions between schools and groups to provide employment courses and workshops can be used to implement industry–university cooperation and solve human resource needs. Experts and scholars can help the industry optimize standard operating procedures and improve various operating skills to reserve talents for future improvement. The introduction of basic data and application of training energy and digital transformation intelligence, along with interactive practice, can enable foreign students to optimize various multi-language tour procedures and utilize a second language for tour guides. Taiwan's government is focusing on industrial innovation and cross-domains in the value-

added development coaching strategy, shifting from the needs of a single cluster in the early stages to leading the industry with leaders and emphasizing the development of products/services from 0 to 1; to this end, it is promoting cross-cluster and cross-domain exchanges and connections, driving open innovation cooperation with market insights, and strengthening the business operation model. Regarding thematic innovation in response to environmental dynamics, the government is promoting cross-domain integration with demand orientation, emphasizing the co-evolution from 1 to N, and establishing an ecosystem of industry, government, academia, and the public (Ministry of Economic Affairs, SME Division, 2016).

### B. Innovative Business Model

Tourism factories already have high visibility in Taiwan, so they also attract more competition from different industries. Therefore, it is important to highlight their visibility through digital transformation and differentiated marketing strategies. The core capabilities of tourism factories should be consolidated to strengthen them in three directions:

- Optimize educational guided tours, the interesting transfer of cultural values of industries and local companies, warm and moving online and offline experiences, and field stories using digital smart technology that enables visitors to guide and interact with games, etc.
- Optimize the experience tour offered by craftsmen by designing an interactive DIY tour involving the five senses, a higher degree of related processes, and a finished product display; all tours should be imaged and digitized, and packaging creativity should be considered.
- Optimize the value-added aesthetic design of products, strengthen the design texture (store areas, products, gift boxes, etc.), and combine online and offline publicity and sales to enhance corporate brand value.

Venues should also provide satisfactory catering services as a fourth direction to encourage tourists to stay

longer and improve overall business performance. In any case, a tourism factory should use local characteristic buildings and local resources to implement opportunities and platforms of social corporate responsibility in order to highlight and differentiate their unique positioning among many tourist attractions.

The two-year pandemic has hit the tourism market and industry hard, but the crisis has also served as a turning point, inspiring all industries to make efforts to transform and find a way to survive. A tourism factory adopts the themes of industry and local culture, which can use digital images and somatosensory interactions, technology, social media, and online shopping and other network service mechanisms to strengthen the function and value of composite services (e.g., education, entertainment, shopping, and catering), thereby integrating the resources of regional tourism and tourism operators while creating integrated regional tourism in a cultural and creative industry. A regional tourism characteristic of the service network should also provide offline experiences and online shopping and services while further highlighting new traditional tourist attractions and linking the effects of regional development and local creation. Sightseeing factories with local economic characteristics can usually represent the natural resources and humanistic economic history of a region in detail or can present the development background and evolution of an industry while promoting unique cultural values. Taiwan's innovative business models in his area have become one of the most competitive tourism brands and innovative business models in the world.

Table 5 (Innovative Business Model of Taiwan Tourism Factory) summarizes the comprehensive collection of literature and discussion data presented in this article, as well as the corresponding development directions and actual operation mode of current tourism factories in Taiwan. During the establishment and operation of a tourist factory, the enterprise should adopt self-inspections with an operational focus and underscore the integrity of the development strategy.

<p><b>【Online Front-end platform】</b></p> <ul style="list-style-type: none"> <li>■ Various online shopping/travel platforms/live group buying</li> </ul>		<p><b>【Online Back-end platform】</b></p> <ul style="list-style-type: none"> <li>■ OMO member management / Big data analysis</li> </ul>		
<p><b>【Partner Partnership】</b></p> <ul style="list-style-type: none"> <li>■Nearby tourist factories</li> <li>■Nearby attractions &amp; hotels</li> <li>■Regional &amp; National Associations</li> <li>■Travel agency/tour vehicle industry</li> <li>■School/public sector</li> <li>■Network platform</li> <li>Social media</li> <li>■ITRI/ CSD</li> <li>■Bureau / Cultural Affairs Bureau / Economic Development Bureau / Agriculture Bureau / Industrial Development Association / Education Bureau</li> <li>■Active traffic information provider</li> <li>■Internet celebrity/ KOL</li> </ul>	<p><b>【Enterprise Activities】</b></p> <ul style="list-style-type: none"> <li>■Handmade by craftsmen/festival gift box/educational guide</li> <li>■A series of experience activities in local cultural centers</li> <li>■Charitable donations from disadvantaged groups</li> <li>■Annual festival activities in the factory</li> <li>■All physical channels can buy goods and services</li> <li>■Outside the factory experience hand-made activity service</li> <li>■Student off-campus education/environmental education</li> <li>■O2O interactive tour/social media management</li> </ul>	<p><b>【Enterprise Value】</b></p> <ul style="list-style-type: none"> <li>■Industry Tourism</li> <li>■Experiential travel</li> <li>■Cultural creativity</li> <li>■Environmental education</li> <li>■Regional revitalization</li> <li>■Aesthetics of life</li> <li>■Import of digital technology</li> <li>■ Cross-domain bonus</li> <li>■Industrial Life Museum</li> <li>■Local characteristic cultural center</li> <li>■Social corporate responsibility</li> </ul>	<p><b>【Customer relationship】</b></p> <ul style="list-style-type: none"> <li>■Ticket-free visit</li> <li>■Ticket offset consumption</li> <li>■Shopping discounts</li> <li>■Free trial experience</li> <li>■BtoB performance reward commission</li> <li>■Exclusive itinerary planning</li> </ul>	<p><b>【Target Customer】</b></p> <ul style="list-style-type: none"> <li>■Family parent-child</li> <li>■Domestic tourists</li> <li>■Elementary /middle/high school&amp;university students</li> <li>■Social organization</li> <li>■Elderly groups</li> <li>■Village/District Chief Group</li> <li>■Foreign tourists</li> <li>■Public sector visits</li> <li>■EMBA and master classes</li> </ul>
	<p><b>【Enterprise resources】</b></p> <ul style="list-style-type: none"> <li>■Connect existing channels /product advantages</li> <li>■Established new direct sales stores</li> <li>■Customer satisfaction /customer unit price/number of visitors</li> <li>■The first or only company in Taiwan</li> <li>■Make good use of the guidance resources of governments at all levels and research institutions</li> </ul>		<p><b>【Distribution Channel】</b></p> <ul style="list-style-type: none"> <li>■Self-operated stores</li> <li>■Travel agency/tour vehicle industry</li> <li>■School/public sector</li> <li>■Internet Platform</li> <li>■Social media</li> <li>■Other physical retail stores</li> </ul>	
<p><b>【Cost structure】</b></p> <ul style="list-style-type: none"> <li>■Field hardware optimization and continuous digital intelligence every 1-5 years</li> <li>■The establishment of bright spots on the site</li> <li>■Service process training and standardization</li> </ul>		<p><b>【revenue streams】</b></p> <ul style="list-style-type: none"> <li>■Tour/handmade/meal/online shopping income</li> <li>■festive gift box/group purchase/local regular customers/new catering customers</li> <li>■Other new business opportunities for cooperation (consignment...)</li> </ul>		

Table 5: Innovative Business Model of Taiwan Tourism Factory

Source: Compiled by this study, CSD/ Corporate Synergy Development Center

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