IV

TAICCA

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**2022** Taiwan Cultural Content Industries Survey Report

IV

IV

Taiwan Cultural Content
Industries Survey Report 2022 Vol. IV

# Gaming • Esports Industries

TAICCA

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# FOREWORD

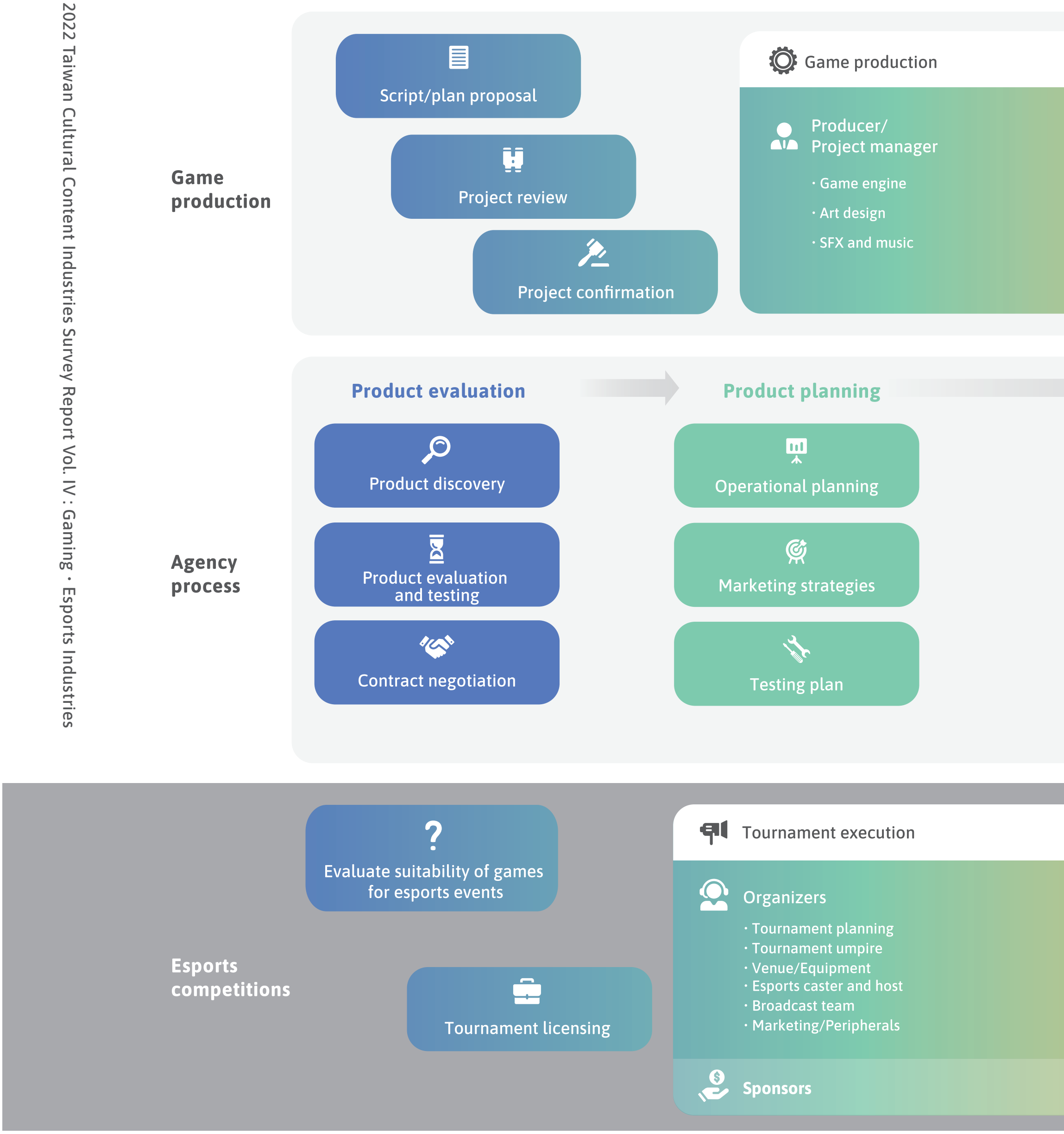
# 01

## Scope of the Survey

This report was created to accurately reflect the current state of Taiwan's cultural content industry. It provides the government and industry with the latest industry development trends and serves as the foundation for establishing industry development objectives and implementing policies. The Taiwan Creative Content Agency (TAICCA) conducted the *Taiwan Cultural Content Industry Survey Report*, dividing the survey report into four volumes based on industry relevance: "Book, Magazine, Comic, and Character Brand Licensing Industries," "Motion Picture, Television, and Animation Industries," "Popular Music and Radio Industries," and "Gaming and Esports Industries."

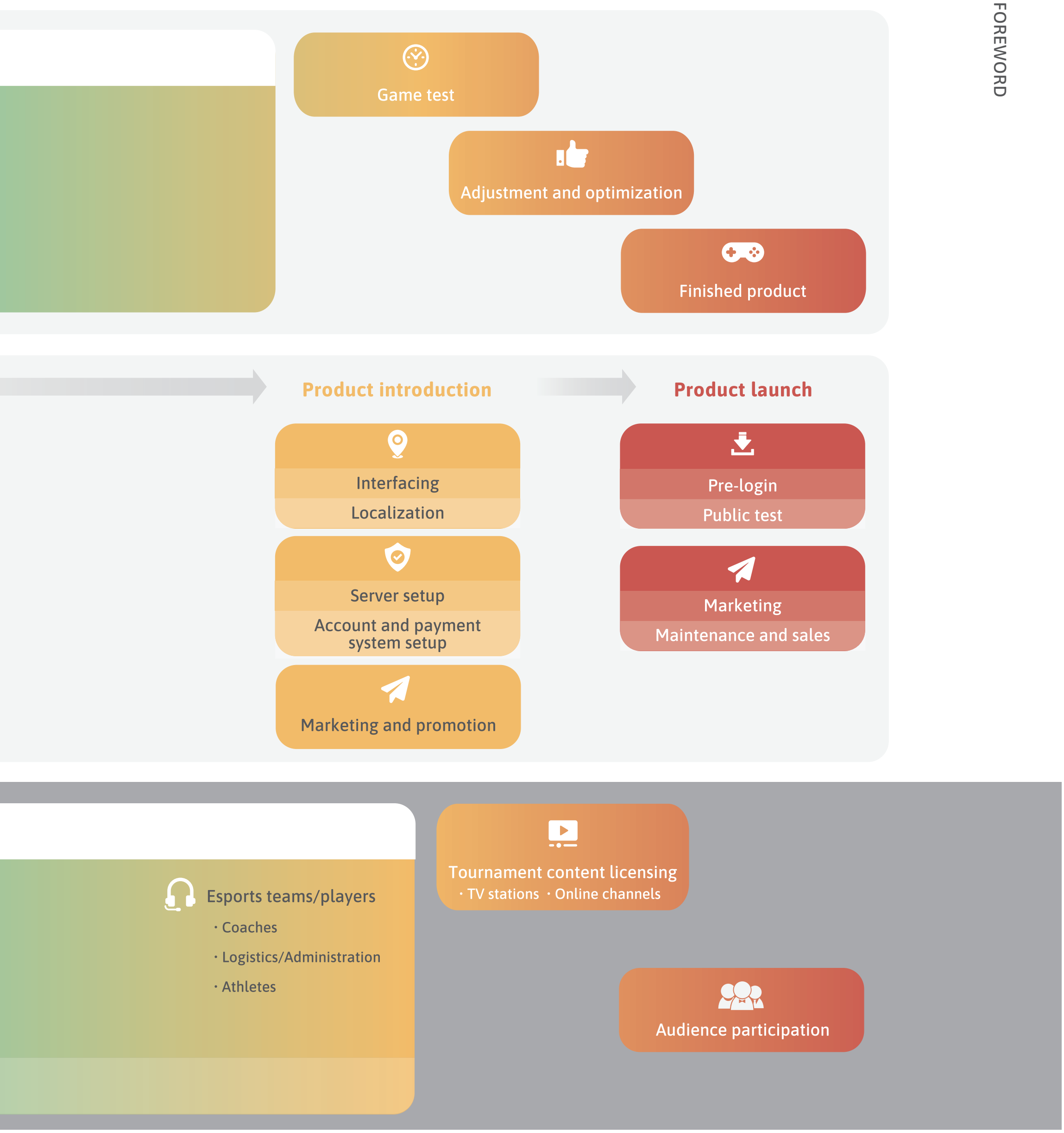
This is Volume IV of the *2022 Taiwan Cultural Content Industries Survey Report*. The subjects of the survey include game development, game operation/agent/distribution, esports events, esports teams, and other industries. The scope of this year's survey is based on the yearly *Taiwan Cultural Content Industries Survey Report Vol. IV: Gaming and Esports Industries*, which includes game content creation and production during the upstream creative phase; game operation/agent/distribution during the midstream to downstream end; as well as the downstream exhibition/receiving end, which includes game sales channels, digital platforms, virtual treasure (in-game items) trading platforms, esports event sectors, etc., in addition to supporting services, mainly, the gaming, esports media, and marketing sectors.

Due to the different number of practitioners in each subindustry, there were slight differences in the survey methods. This year, the survey subjects were divided into two types: “qualitative and quantitative surveys” and “mainly qualitative surveys.” The subjects of both qualitative and quantitative surveys included game development, game operation/agent/ publishing, esports events, and esports teams; whereas the subjects of mainly qualitative surveys included game channels, digital platforms, virtual treasure trading platforms, games, esports media, marketing sectors, and esports players. Please refer to Figure 0-1 below for the scope of the gaming and esports industries:




**Source:** Illustrated by this survey study.

***Figure 0-1.*** Industry map of the gaming and esports industries


Game test
Adjustment and optimization
Finished product
Product introduction
Interfacing
Localization
Server setup
Account and payment system setup
Marketing and promotion
Product launch
Pre-login
Public test
Marketing
Maintenance and sales
Esports teams/players
· Coaches
· Logistics/Administration
· Athletes
Tournament content licensing
· TV stations · Online channels
Audience participation

# 02

## Chapter Overview

The *2022 Cultural Content Industry Survey Report Vol. IV: Gaming and Esports Industries* is divided into three chapters. Chapter 1 is a spotlight on significant and relevant statistical results from the survey that are of interest to the industry. Chapter 2 is an overview of the industry, which shows the survey results of this year's gaming and esports subindustries, and gives a brief description of the number of staff, total revenue, total expenditure, and revenue structure of a number of companies. Chapter 3 is a forecast of possible trends and prospects for the industry based on this survey report.

The structure and results of this study were similar to those of the 2020 and 2021 surveys. Quantitative and qualitative surveys were done on sub-sectors like the domestic game development industry, game operation/agency/distribution companies, esports teams, and esports competition leagues. The core items of the survey included industry characteristics, revenue and business model, IP licensing trends, digital development trends, etc. In addition, through special reports on development trends and important issues in the global gaming and esports industries, relevant sectors could refer to this data for subsequent strategy developments in the future.

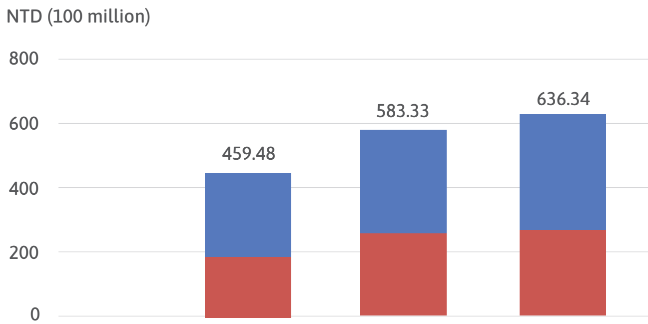
# I

# SPOTLIGHT

# 01

# Overview of Taiwan's Gaming and Esports Industries Revenue

Total revenue of the gaming and esports industries was estimated at NT$63.634 billion in 2021, representing a 9.1% increase over 2020. Revenues from subindustries such as game development, game operation/agency/distribution, esports events, and esports teams were included in the total. From 2019 to 2021, the overall gaming and esports industry revenue grew, with the main driver of growth being game operation/agency/distribution.




| Subindustry | 2019 | 2020 | 2021 |
|---|---|---|---|
| Esports teams | 0.40 | 0.71 | 0.60 |
| Esports events | 2.42 | 2.53 | 4.30 |
| Game operation/agency/distribution | 254.28 | 326.00 | 358.71 |
| Game development | 202.38 | 254.09 | 272.73 |

**Source:** Estimated by this survey study.

**Notes:**

❶Since there are no tax and industry codes that directly correspond to the sub-sectors of the gaming and esports industries, industry classification is based on the main businesses or service items registered by the interviewed industry players, as well as businesses that accounted for a higher percentage of revenue.

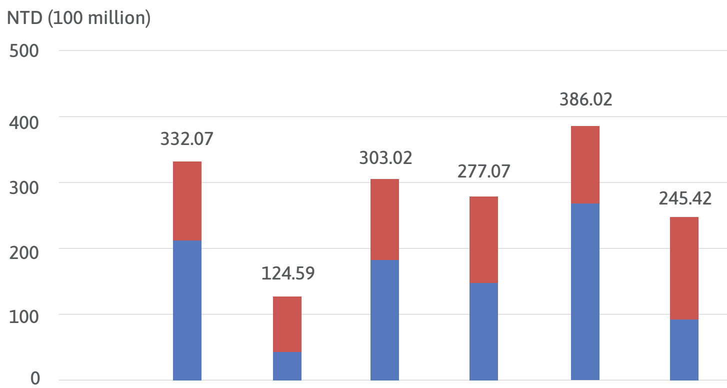
❷To avoid double-counting of revenues, subsidiaries' and branches' revenues are credited to the parent firm.

***Figure 1-1.*** Revenue of Taiwan's gaming and esports industries from 2019 to 2021

# 02

## Taiwan's Gaming Industry Revenue at Home and Abroad

In 2021, Taiwan's gaming industry's "overseas revenue" was NT$24.542 billion, and its "domestic revenue" was NT$38.602 billion. In terms of subindustries, game operation/agency/distribution made NT$26.807 billion in "domestic revenue," which accounted for 74.7% of the revenue of this sector and increased by 48.4% over 2020, while "overseas revenue" declined by 37.7%. At NT$15.778 billion, "overseas revenue" took up a bigger proportion, or 56.8%, of the total revenue of game developers, whose "domestic revenue" decreased by 3.6% and "overseas revenue" increased by 17.5% from 2020.




| Subindustry | Domestic | Foreign | Domestic | Foreign | Domestic | Foreign |
|---|---|---|---|---|---|---|
| | 2019 | | 2020 | | 2021 | |
| Game development | 119.62 | 82.76 | 122.40 | 131.69 | 117.95 | 154.78 |
| Game operation/ agency/distribution | 212.45 | 41.83 | 180.62 | 145.38 | 268.07 | 90.64 |

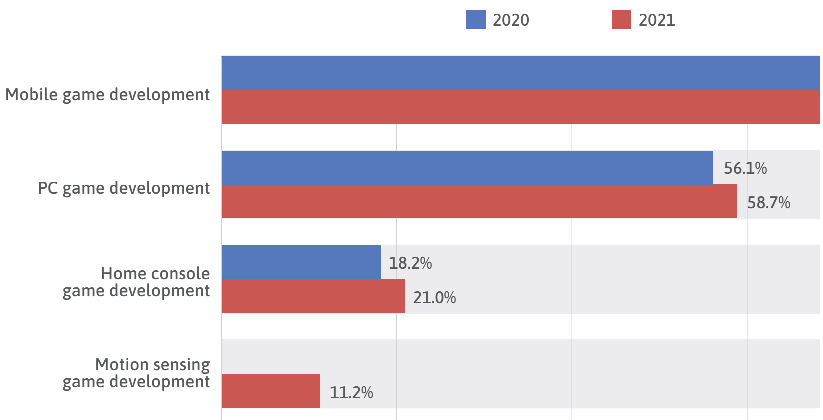
**Source:** Estimated by this survey study.

***Figure 1-2.*** Taiwan's gaming industry revenue at home and abroad from 2019 to 2021

# 03

## Types of Games Developed by Taiwan's Gaming Industry

In 2021, "mobile games" was the most popular type of games developed, accounting for 69.9% of all the games developed, followed by "PC games" (58.7%), "home console games" (21.0%), and "motion sensing games" (11.2%).




**Source:** Organized by this survey study.
**Note:**
Motion sensing games (i.e., games that utilize motion-sensor gaming devices) were added as a survey item in 2021.

***Figure 1-3.*** Types of games developed by Taiwan's gaming industry from 2020 to 2021

As for the genres of games in development in 2021, role-playing games accounted for the highest percentage (26.2%), followed by action games (17.8%). As for games that were already developed, role-playing games once again accounted for the highest proportion (38.0%), followed by adventure games (18.0%).



**_Table 1-1._ Types of games in development and already developed by Taiwan's gaming industry in 2021**

| Game genre | In development | Developed |
|---|---|---|
| Action | 17.9% | 14.0% |
| Role-playing | 26.2% | 38.0% |
| Adventure | 10.7% | 18.0% |
| Shooter | 4.8% | 2.0% |
| Sports | 1.2% | 0.0% |
| Strategy simulation | 9.5% | 6.0% |
| Puzzle | 9.5% | 8.0% |
| Racing | 4.8% | 2.0% |
| Tile-matching | 1.2% | 4.0% |
| Casual | 9.5% | 12.0% |
| Adult | 2.4% | 4.0% |
| Board and card games | 2.4% | 4.0% |
| Other | 9.5% | 8.0% |

**Source:** Organized by this survey study.

**Notes:**

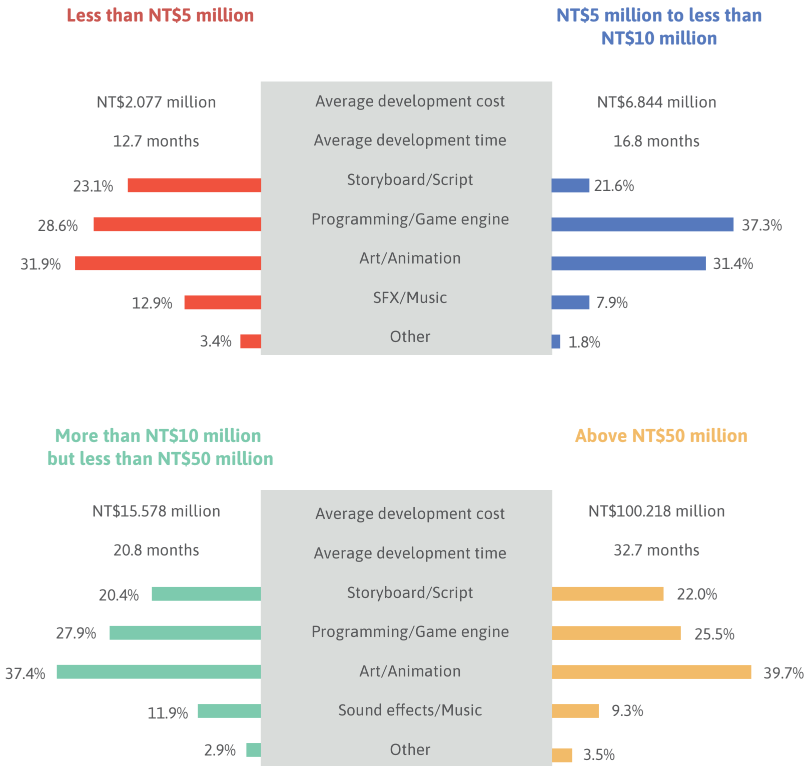
❶The information about games in development or already developed is based on survey responses from industry players.

❷"Developed games" refers to the games that were completed in 2021 and not the ones released in the year.

# 04

## Overview of Taiwan's Game Production Sector

The 2021 survey examined game production across a range of production costs and discovered that the larger the development scale, the longer it took on average to develop a game. The average time required to develop a game with a development cost of "less than NT$5 million" was approximately 12.7 months, while the average time required to develop a large-scale game with a development cost of "more than NT$50 million" was approximately 32 months. Additionally, as the scale of development grew, so did the expenditures on "art/animation." For games with a development budget of "less than NT$5 million," "art/animation" accounted for approximately 31.9% of the total cost; however, for games with a development budget of "more than NT$50 million," "art/animation" accounted for 39.7% of the total cost.




**Source:** Organized by this survey study.

***Figure 1-4.*** Overview of Taiwan's game production in 2021 by development scale

# 05

## Overview of Esports Events in Taiwan

In 2021, due to the outbreak of the epidemic in Taiwan, most of the tournaments were held online. According to the websites of professional leagues, amateur tournaments, and tournament organizers, as well as the survey results of this study, a total of 6,756 "online events" and 76 "offline events" were held in 2021.

"Offline events" had higher average costs, income, and prize money compared to "online events." "Online events" drew a larger audience than "offline events." "Offline events" had an average of 1,266 spectators, while "online events" drew an average of approximately 8,361. In addition, the average revenue of online tournaments was about NT$1 million, while the average revenue of offline tournaments was about NT$2 million.

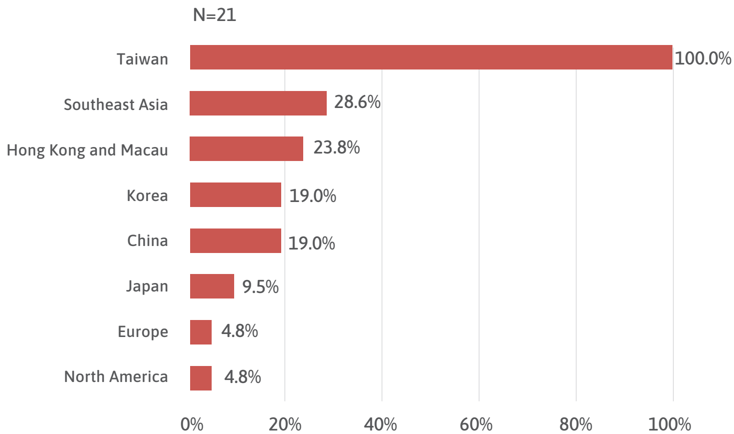
| Online Esports Events | | Offline Esports Events |
|---|---|---|
| 6,756 | Total number of matches | 76 |
| NT$500,000 | Average cost | NT$1.75 million |
| NT$1 million | Average income | NT$2 million |
| NT$200,000 | Average amount of prize money | NT$1 million |
| 8,361 people | Average audience | 1,266 people |

**Source:** PCS (LoL Pacific Championship Series), GCS (Garena Challenger Series), ACS (Arena of Valor Campus Series), LSC (League of Legends School Championship), and various tournament official websites, and this survey study.

***Figure 1-5.*** Overview of Taiwan's esports industry events in 2021

According to EsportChart, at the major professional tournaments (such as the *League of Legends* PCS and *Arena of Valor* GCS) in which domestic esports teams mainly participate, the average number of spectators at PCS (Pacific Championship Series) spring tournaments was 17,196, with 54,773 during peak traffic, and 21,841 at summer tournaments (including playoffs), with 93,528 during peak traffic. For the summer season (including playoffs), there were 21,841 viewers and 93,528 peak-time viewers. In the GCS Pro League (Garena Challenger Series), the average audience for the spring tournament was 8,842 and the peak-time audience was 26,650; the average audience for the summer tournament (including playoffs) was 11,166 and the peak-time audience was 44,839.

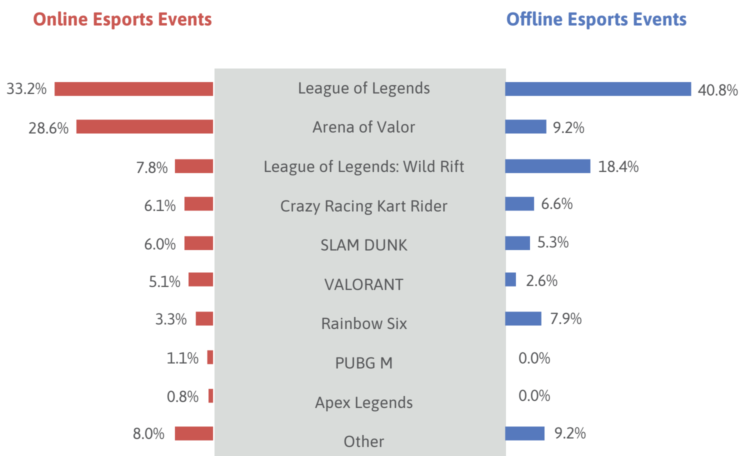
In terms of the major regions for domestic esports, the majority of them was in Taiwan (100%), followed by Southeast Asia (28.6%), and Hong Kong and Macau (23.8%).




**Source:** Organized by this survey study.
**Note:** Multiple responses were allowed, so the added percentage was greater than 100.

***Figure 1-6.*** Area of activity for Taiwan's esports competitions in 2021 (multiple selections allowed)

In terms of esports events, the main game held in online events was *League of Legends,* accounting for 33.2%, followed by *Arena of Valor*, accounting for 28.6%. *League of Legends* was also the most popular game in offline tournaments, accounting for 40.8%, followed by *Lead of Legends: Wild Rift* (18.4%). Other video game tournaments included *PUBG M, Garena Free Fire, Summoners Go, CS:GO, Naraka: Bladepoint, NBA 2K22, FIFA*, etc.




**Source:** PCS, GCS, ACS, LSC, tournament company websites, and this study's survey results.
**Note:** The total number of online events is 6,756; the total number of offline events is 76.

***Figure 1-7.*** Overview of games tournaments held by Taiwan's esports companies in 2021

# 06

## Overview of Taiwan's Esports Teams and Talent Availability

An esports team is composed of four categories of professionals: players, trainees, coaches, and staff. The following section defines each category of personnel.

***Table 1-2.*** Esports team structure

| Job Title | Description |
|---|---|
| Official Player | Official players are players who have been officially registered on the team roster for a specific esports competition category. |
| Trainee | Trainees are players who have demonstrated the potential to develop into official players in a particular esports title. They join an esports team on short-term contracts in order to receive additional training. Trainees are typically 14 to 17-year- old students who are still enrolled in school prior to becoming officially registered official players. |
| Coach | Coaches are retired official players or highly experienced amateur players who assist players in acquiring game knowledge, developing competition strategies, and building mental fortitude. |
| Staff | Staff for an esports team includes team leads, managers, esports team analysts, game analysts, nutritionists, and other support roles that help players prepare for competitions. |

**Source:** Chinese Taipei Esports Association.

In 2021, the average esports team consisted of 19 members, including nine "official players," two "trainees," two "coaches," and six "support staff." "Official players" have an average career length of 3.3 years; "trainees" have an average career length of 0.3 year; and "coaches" have an average career length of 5.8 years. In terms of management contracts, 80% of "official players" have signed them, while 40 % of "trainees" and 75% of "coaches" have. In comparison to 2020, the size of the team, the number of official players, and the number of  staff all increased slightly in 2021.

***Table 1-3.*** **Overview of Taiwan's esports teams from 2019 to 2021 by manpower**

| Job Title | Survey year | Average number of people | Average career length (years) | Percentage of those with management contracts |
|---|---|---|---|---|
| Official players | 2021 | 9 | 3.3 | 80.0% |
| | 2020 | 7 | 2.5 | 83.0% |
| | 2019 | 15 | 2.5 | 64.8% |
| Trainees | 2021 | 2 | 0.3 | 40.0% |
| | 2020 | 2 | 0.6 | 43.6% |
| | 2019 | 4 | 1 | 30.0% |
| Coaches | 2021 | 2 | 5.8 | 75.0% |
| | 2020 | 2 | 5.2 | 61.1% |
| | 2019 | 3 | 6.4 | 36.7% |
| Staff | 2021 | 6 | - | - |
| | 2020 | 4 | - | - |
| | 2019 | 6 | - | - |

**Source:** Organized by this survey study.

Campus esports teams averaged 33 people, with around 24 “official players,” 2 “coaches,” and 7 “staff.” Also, the average number of graduates from departments with campus esports teams was about 85 per year, and about 6% of those students, or about 5 per year, went into the industry after they graduated.

***Table 1-4.*** Overview of campus esports teams in 2021 by manpower

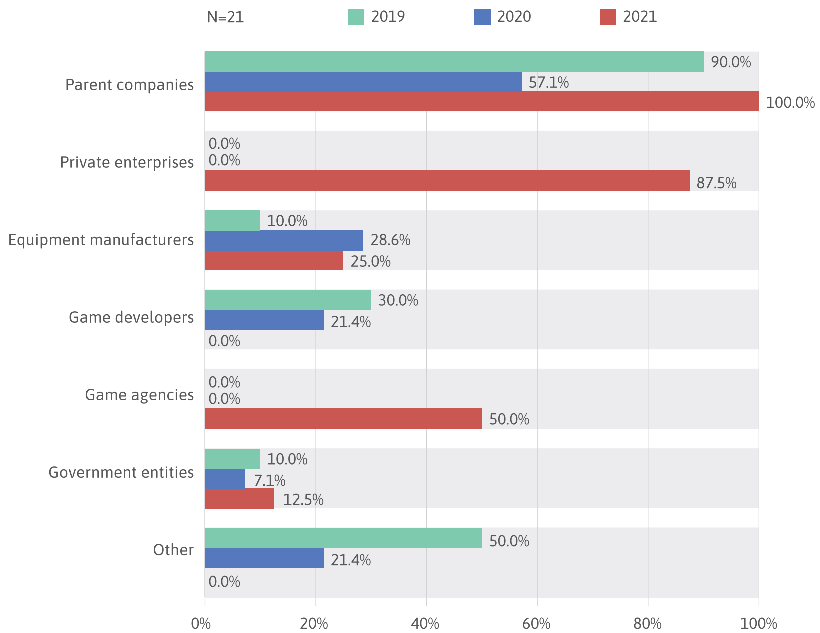
| Item | Official players | Coaches | Support staff | Total |
|---|---|---|---|---|
| Average number of people | 24 | 2 | 7 | 33 |

**Source:** Organized by this survey study.
**Note:**
The campus esports survey focused on colleges and universities that participated in the LSC and ACS campus leagues. However, results of the survey showed that the purpose and structure of each department’s esports program are different. As a result, there are differences in the allocation of manpower among campus esports teams, so the profiles compiled in this study are for reference only.

# 07

## Source of Funding for Taiwan's Esports Teams

In 2021, "parent companies" were the main source of funding for the esports industry, accounting for 100%, followed by "private enterprises," accounting for 87.5%, and "game agencies," accounting for 50%.

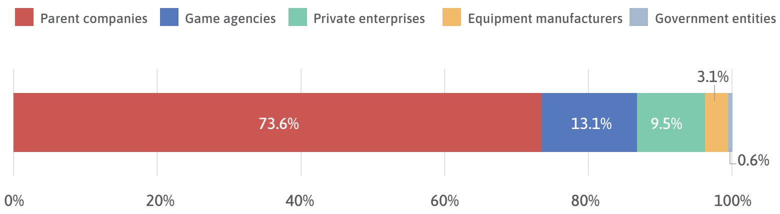



**Source:** Organized by this survey study.
**Notes:**
❶Multiple responses were allowed, so the added percentage was greater than 100.
❷The total number of survey respondents was 10 in 2019, 14 in 2020, and 8 in 2021.
❸The options of game agents and private enterprises were added in 2021.

***Figure 1-8.*** Overview of Taiwan's esports industry events in 2021

In terms of the percentage of sponsorship, “parent companies” accounted for the most, at 73.6%, then “game agencies,” 13.1%, and “private enterprises,” 9.5%.






**Source:** Organized by this survey study.

***Figure 1-9.*** Breakdown of sponsorship revenue in the esports industry in 2021 (multiple selections allowed)

# II

# OVERVIEW

# 01

# Gaming Industry

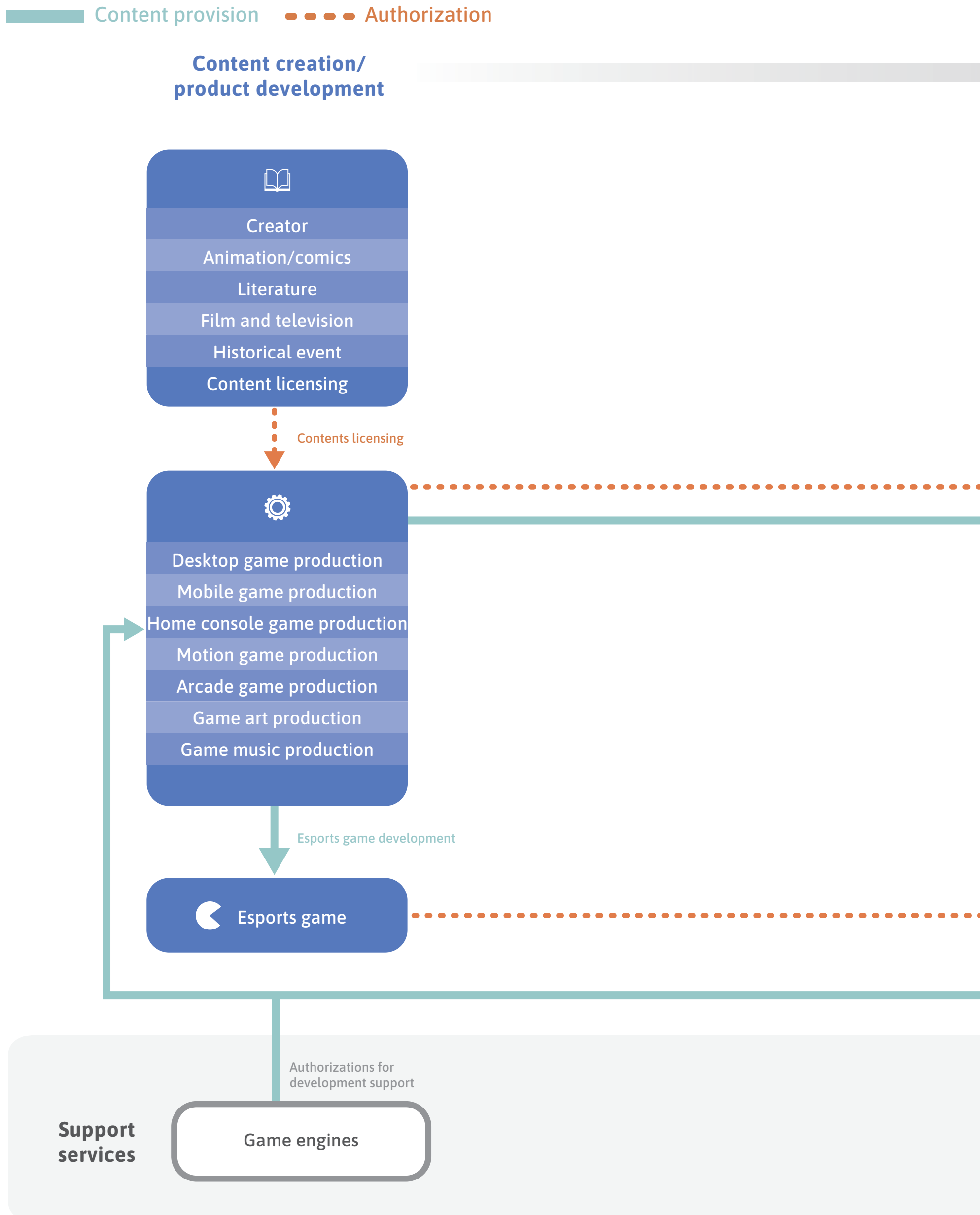
## 1.1. Overall Industry Profile

### 1.1.1. Taiwan gaming industry relationship map

"Content creation and production" is the upstream segment of the gaming industry map. This is where content is made and distributed with the help of supporting industries. The supporting industry constructs a business environment that fosters "content creation and production" activities. The type of device, platform, or service developed can be classified into PC, mobile phone, home console, motion gaming, arcade gaming, and technical support service.

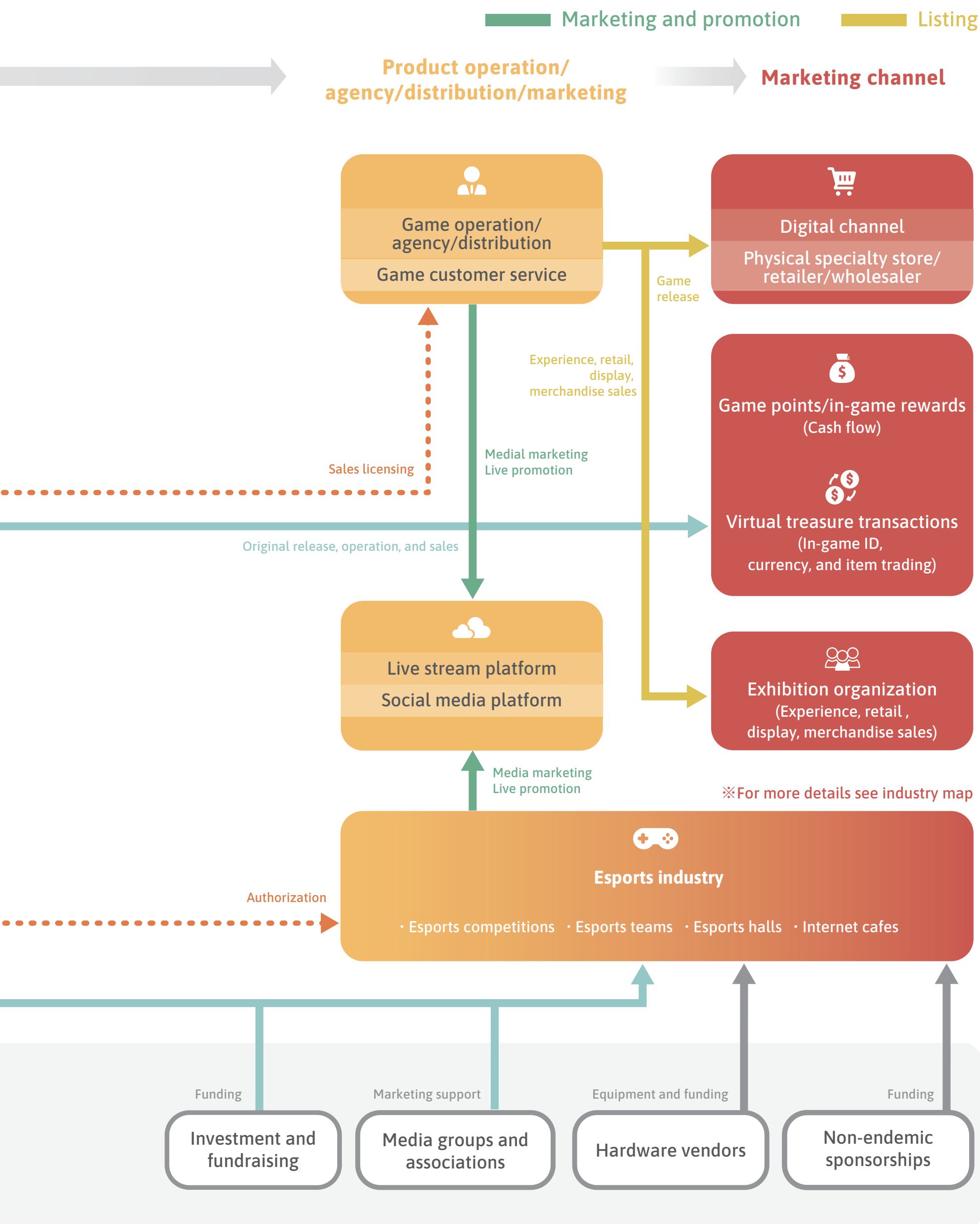
"Operations, agency, distribution, and marketing" is the midstream portion. Following the acquisition of the upstream "products," the industry's "operations, agency, and distribution" providers provide promotion and marketing services, while some companies handle product development and distribution themselves. Domestic gamers are accustomed to using game media such as Twitch, Bahamut's YouTube channel, Discord, Wolves Valley on Yahoo!, Gamebase, Newtalk, 4Gamers, and so on.

"Physical" and "digital" are the two types of "marketing channels," with "digital" being the main one. Digital sales channels include the Apple Store, Google Play, Steam, Epic, and others. Several larger game developers also sell their own games on their own platforms, such as EA's Origin. This segment of the industry also includes cash flow services like GASH+ and MyCard, as well as virtual treasure trading platforms like the 8591 treasure trading website.




**Source:** Illustrated by this survey study.

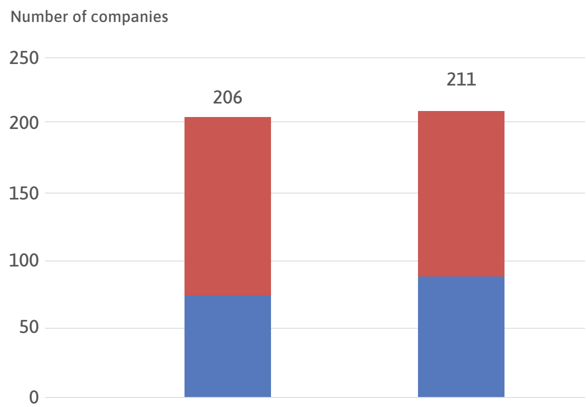
***Figure 2-1.*** Taiwan's gaming industry map



Marketing and promotion
Listing
Product operation/ agency/distribution/marketing
Marketing channel
Game operation/ agency/distribution
Game customer service
Digital channel
Physical specialty store/ retailer/wholesaler
Game release
Experience, retail, display, merchandise sales
Game points/in-game rewards
(Cash flow)
Medial marketing
Live promotion
Sales licensing
Virtual treasure transactions
(In-game ID, currency, and item trading)
Original release, operation, and sales
Live stream platform
Social media platform
Exhibition organization
(Experience, retail , display, merchandise sales)
Media marketing
Live promotion
※For more details see industry map
Esports industry
Authorization
・Esports competitions ・Esports teams ・Esports halls ・Internet cafes
Funding
Marketing support
Equipment and funding
Funding
Investment and fundraising
Media groups and associations
Hardware vendors
Non-endemic sponsorships

### 1.1.2. Number of companies in Taiwan's gaming industry

The 2021 survey showed that there were 211 game companies in Taiwan's gaming industry, including 124 companies in "game development" and 87 companies in "game operation/agency/distribution." The total number of game companies increased by a slight 2.4% compared to 2020.




| Industry | 2020 | 2021 |
|---|---|---|
| Game development | 131 | 124 |
| Game operation/agency/distribution | 75 | 87 |

**Source:** Organized by this survey study.

**Notes:**

❶Since there are no tax and industry codes that directly correspond to the sub-sectors of the gaming and esports industries, the list of gaming industry players was made up of survey participants from previous years, members of gaming industry-related public associations, exhibitors at the Taipei Game Show, participants in the Taipei Game Developers Forum, digital content industry business negotiation companies, the indie game development incentive program, the Taiwan Entertainment Software Rating Information website, related venture capital companies, and companies that had received subsidies and venture capital.

❷Since there are no tax and industry codes that directly correspond to the sub-sectors of the gaming and esports industries, industry classification is based on the main businesses or service items registered by the interviewed industry players, as well as businesses that accounted for a higher percentage of revenue.

***Figure 2-2.*** Number of Taiwan's gaming companies surveyed from 2020 to 2021

### 1.1.3. Capital scale of Taiwan's gaming companies

In 2021, the capital scale of game developers was mostly "less than NT$5 million," accounting for 38.6% of the total, while those with capital below NT$10 million accounted for 51.8%. Those with capital above NT$100 million accounted for 21.1% of the total, and the average capital scale and median were lower than companies in game operation/agency/distribution.

The capital scale of enterprises in gaming operation/agency/distribution was largely "less than NT$5 million," although the majority of them were Taiwanese branches of foreign companies. Companies with a capital of more than NT$100 million had an average capital of NT$230 million and a median capital of NT$42.31 million, both of which were greater than game development companies.

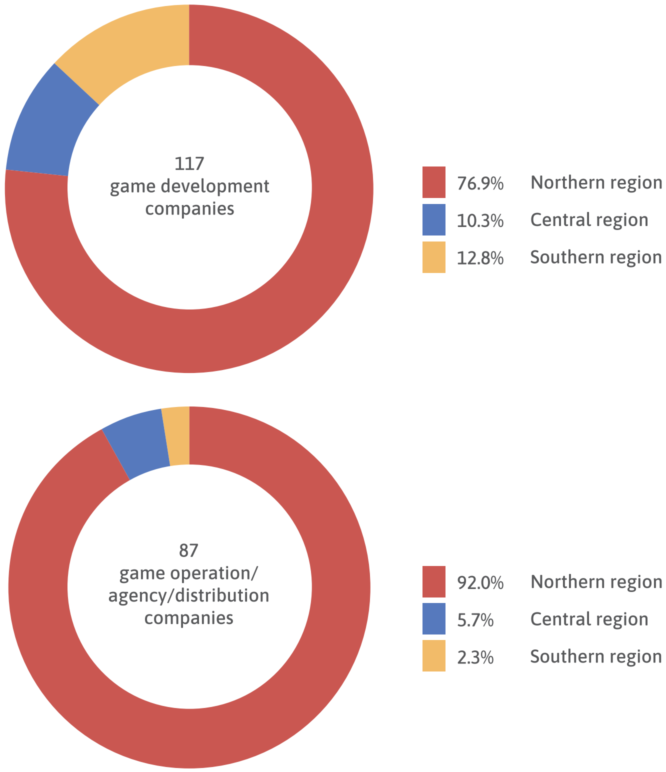
***Table 2-1.*** Capital size of sub-sectors in Taiwan's gaming industry in 2021

| Capital | Game development | Game operation/agency/distribution |
|---|---|---|
| Number of companies | 124 | 87 |
| | | |
| Less than NT$5 million | 38.6% | 29.1% |
| NT$5 million to NT$10 million (not inclusive) | 13.2% | 9.3% |
| NT$10 million to NT$50 million (not inclusive) | 21.1% | 12.8% |
| NT$50 million to NT$100 million (not inclusive) | 6.1% | 9.3% |
| NT$100 million to NT$500 million (not inclusive) | 11.4% | 23.3% |
| Over NT$500 million | 9.6% | 16.3% |
| | | |
| Average capital (NT$) | 129 million | 230 million |
| Maximum capital (NT$) | 2 billion | 2.5 billion |
| Median capital (NT$) | 8 million | 42.31 million |
| Minimum capital (NT$) | 20,000 | 100,000 |

**Source:** Organized by this survey study.

### 1.1.4. Regional distribution of Taiwan's gaming companies

Most of the gaming companies in Taiwan are clustered in the "northern region." 76.9% of the companies in game development are located in the "northern region," and 92.0% of the companies in game operation/agency/distribution are located in the "northern region." Compared with game developers, game operators/agents/distributors are more clustered in the "northern region."




**Source:** Organized by this survey study.

**Notes:**

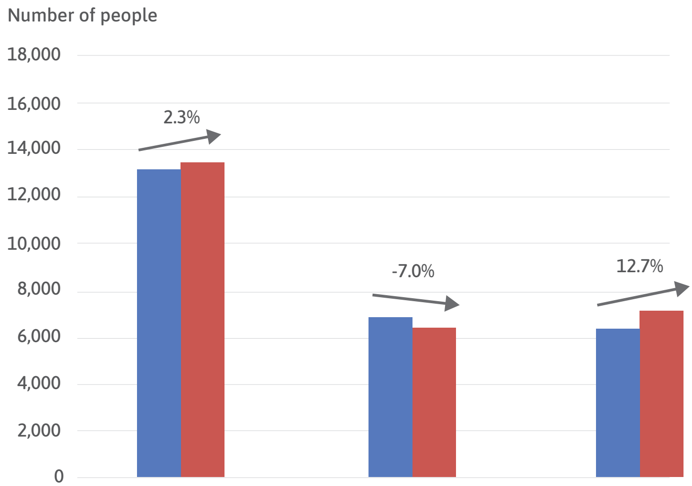
❶The northern region included Taipei City, New Taipei City, Keelung City, Taoyuan City, Hsinchu City, Hsinchu County, and Yilan County; the central region included Miaoli County, Taichung City, Changhua County, Nantou County, and Yunlin County; and the southern region included Chiayi County, Chiayi County City, Tainan City, Kaohsiung City, and Pingtung County.

❷A total of seven companies did not have a registered address.

***Figure 2-3.*** Number of companies in Taiwan's gaming industry in 2021

### 1.1.5. Number of employees in Taiwan's gaming companies

The total number of employees in Taiwan's gaming industry was estimated at 13,470 in 2021, an increase of 2.5% compared to 2020 (13,146). Among them, the number of employees in the "gaming operation/agency/distribution" industry was relatively higher, at 7,119. This accounted for 52.9% of the total number of employees in the gaming industry and represented a 12.7% increase compared to 2020, mainly due to the increase in the number of industry players and the growth in the number of employees in some listed companies. The number of employees in "game development" was 6,351, accounting for 47.1%, a decrease of 7.0% from 2020.




| Year | Overall gaming industry | Game development | Game operation/ agency/distribution |
|---|---|---|---|
| 2020 | 13,146 | 6,832 | 6,314 |
| 2021 | 13,470 | 6,351 | 7,119 |

**Source:** Organized by this survey study.

**Notes:**

❶Information on employee numbers includes questionnaire survey results, corporate annual reports, and information posted by employment agencies.

❷The number of employees of companies that did not respond to the survey and for which no information was publicly available was estimated using the average number of employees of companies in the same industry with similar capital sizes.

***Figure 2-4.*** Number of employees in Taiwan's gaming industry from 2020 to 2021

In 2021, 23.5% of gaming companies had 30–99 employees, followed by 15–29 employees (19.0%). In each sub-sector, most game development companies had 1-4 employees (23.7%), while companies with fewer than 15 employees accounted for 54.2% of the total, indicating that game developers in Taiwan were still primarily small development teams.

As for game operation/agency/distribution companies, the workforce of 30-99 class claimed the biggest share, while those with more than 100 employees accounted for 20.7% of the total, indicating a significantly larger scale of operation.

***Table 2-2.*** Employment size of Taiwan's gaming companies in 2021

| Employment size | Overall gaming industry | Game development | Game operation/ agency/distribution |
|---|---|---|---|
| 1-4 employees | 15.5% | 23.7% | 3.7% |
| 5-9 employees | 13.0% | 16.1% | 8.5% |
| 10-14 employees | 12.5% | 14.4% | 9.8% |
| 15-29 employees | 19.0% | 14.4% | 25.6% |
| 30-99 employees | 23.5% | 17.8% | 31.7% |
| 100-299 employees | 12.5% | 10.2% | 15.9% |
| More than 300 employees | 4.0% | 3.4% | 4.9% |

**Source:** Organized by this survey study.

### 1.1.6. Number of years Taiwan's gaming companies have been established

As of the end of 2021, most of the domestic gaming industry companies have been established for "less than 5 years" (44.7%). In particular, in the game development industry, more than 50% of the companies have been established for less than 5 years.

***Table 2-3.*** Number of years established for Taiwan's gaming companies in 2021

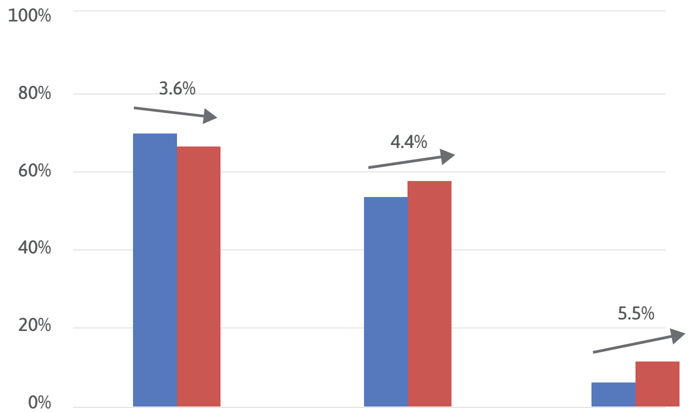
| Number of years established | Overall gaming industry | Game development | Game operation/ agency/distribution |
|---|---|---|---|
| Less than five years | 44.7% | 53.9% | 32.1% |
| 5 to 9 years | 31.7% | 30.4% | 33.3% |
| 10 to 14 years | 7.0% | 5.2% | 9.5% |
| 15 to 19 years | 6.5% | 3.5% | 10.8% |
| More than 20 years | 10.1% | 7.0% | 14.3% |

**Source:** Business registration information organized by this survey study.

# 1.2. Revenue and Business Model

## 1.2.1. Service offerings of Taiwan's gaming companies

The services supplied by the gaming companies in Taiwan in 2021 were "game production" (68.2%), which was 3.6 percentage points less than in 2020; "game operation/agency/distribution" (59.2%), which was 4.4 percentage points higher than in 2020; and "game distribution channel" (12.2%).




| Year | Game production | Game operation/ agency/distribution | Game distribution channel |
|---|---|---|---|
| 2020 | 71.8% | 55.3% | 6.8% |
| 2021 | 68.2% | 59.7% | 12.3% |

**Source:** Organized by this survey study.
**Notes:**
❶N=206 for 2020 and N=211 for 2021.
❷Multiple responses were allowed, so the added percentage was greater than 100.

***Figure 2-5.*** Percentage of the services provided by Taiwan's gaming industry in 2021 (multiple selections allowed)

In 2021, "game agency/distribution" was the most popular service provided by Taiwanese gaming industry players, accounting for 50.2% of all services, a gain of 1.7 percentage points over the previous year. This was followed by "mobile game development," which accounted for 47.4%, a decrease of 4.5% over the previous year. Among all service categories, "digital platform" saw the greatest gain, up 5.1% from the previous year.

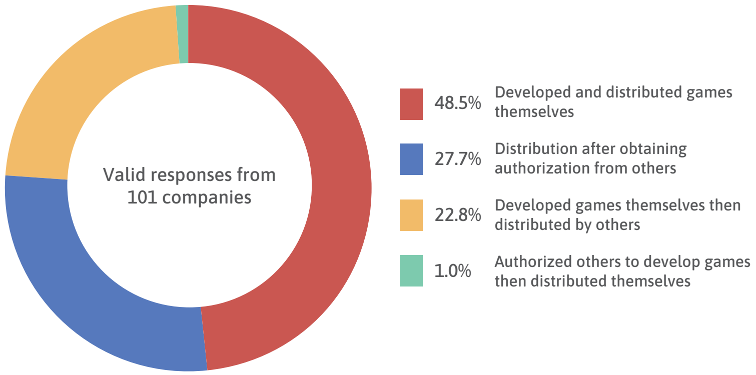
***Table 2-4.*** Percentage of service items provided by Taiwan's gaming companies from 2020 to 2021

| Service item | 2020 | 2021 | Percentage point increase/decrease |
|---|---|---|---|
| Game production | | | |
| PC game development | 40.3% | 39.8% | ▼ 0.5 |
| Mobile game development | 51.9% | 47.4% | ▼ 4.5 |
| Console game development | 13.1% | 14.2% | ▲ 1.1 |
| Motion game development | - | 7.6% | - |
| Technical service: script and planning | 11.2% | 13.7% | ▲ 2.5 |
| Technical service: art and animation | 25.2% | 23.2% | ▼ 2.0 |
| Technical service: programming and software engine | 12.6% | 13.7% | ▲ 1.1 |
| Technical service: sound effects and music | 11.2% | 10.0% | ▼ 1.2 |
| Technical service: others | 7.3% | 7.6% | ▲ 0.3 |
| Game operation/agency/distribution | | | |
| Game operation | 37.9% | 35.5% | ▼ 2.4 |
| Game agency/distribution | 48.5% | 50.2% | ▲ 1.7 |
| Game marketing | 32.5% | 37.0% | ▲ 4.5 |
| Game customer support | - | 27.5% | |
| Sales of game content derivative peripheral merchandise | 14.6% | 12.8% | ▼ 1.8 |
| Game distribution channels | | | |
| Physical channels | 1.9% | 2.4% | ▲ 0.5 |
| Digital platforms | 3.9% | 9.0% | ▲ 5.1 |
| Game points (in-game rewards) | - | 8.1% | |
| Payment services | - | 4.7% | |
| Treasure trading platforms | 1.5% | 1.4% | ▼ 0.1 |
| Others | 0.0% | 0.5% | ▲ 0.5 |

**Source:** Organized by this survey study.
**Notes:**
❶Multiple responses were allowed, so the added percentage was greater than 100.
❷Items that were not surveyed in 2020 are indicated with "-."
❸Other game development services include game testing, commercial machines, and electronic game consoles; other channels include NFT trading platform.

### 1.2.2. Main mode of development and distribution for Taiwan's gaming companies

In 2021, 48.5% of Taiwan's game development/distribution companies "developed and distributed games themselves," followed by "distribution after obtaining authorization from others" (27.7%).




**Source:** Organized by this survey study.

***Figure 2-6.*** Main mode of development and distribution for Taiwan's gaming companies in 2021

Except for companies with “NT$100 million to NT$500 million (not inclusive)” in capital whose production/distribution mode was primarily “distribution after obtaining authorization from others,” the remaining companies primarily “developed and distributed games themselves. The percentage of companies with “less than NT$5 million” in capital whose games were “developed games themselves then distributed by others” was 33.3%, which was greater than the percentage of other companies with the same capital size.

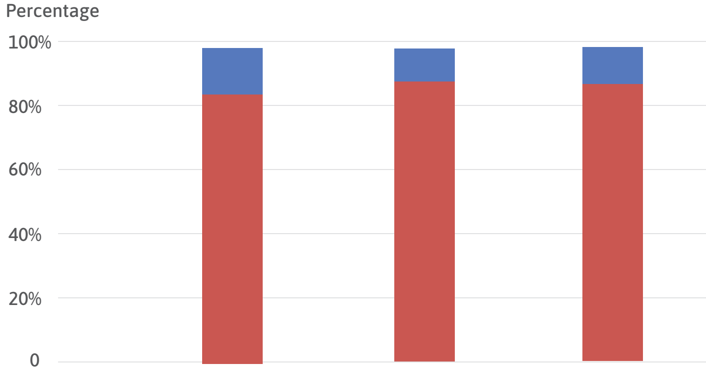
***Table 2-5.*** **Main mode of development and distribution for Taiwan’s gaming companies in 2021 by capital size**

| Business operation | Developed and distributed games themselves | Developed games themselves then distributed by others | Distribution after obtaining authorization from others | Authorized others to develop then distributed themselves |
|---|---|---|---|---|
| Less than NT$5 million | 54.5% | 33.3% | 9.1% | 3.0% |
| NT$5 million to NT$10 million (not inclusive) | 66.7% | 0.0% | 33.3% | 0.0% |
| NT$10 million to NT$100 million (not inclusive) | 50.0% | 25.0% | 25.0% | 0.0% |
| NT$100 million to NT$500 million (not inclusive) | 27.8% | 16.7% | 55.6% | 0.0% |
| NT$500 million or more | 45.0% | 15.0% | 40.0% | 0.0% |

**Source:** Organized by this survey study.

### 1.2.3. Content acquisition for game development in Taiwan

In 2021, 88.2% of the companies surveyed developed their game content via “in-house production,” down 1.5 percentage points from 89.7% in 2020, while “external acquisition” accounted for 11.8%.

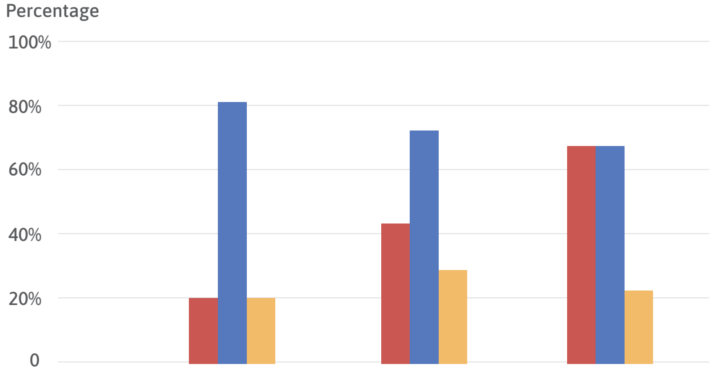



| Mode of acquisition | 2019 | 2020 | 2021 |
|---|---|---|---|
| External acquisition | 15.2% | 10.3% | 11.8% |
| In-house production | 84.8% | 89.7% | 88.2% |

**Source:** Organized by this survey study.

***Figure 2-7.*** Overview of content acquisition for game development in Taiwan from 2019 to 2021

Among those who acquired content from external sources, "co-development with creators" was the most popular mode of game development in both 2019 and 2020, while "purchase from original creators" and "co-development with creators" were the same in 2021, at 66.7%.




| External acquisition | 2019 | 2020 | 2021 |
|---|---|---|---|
| Purchase from creators | 20.0% | 42.9% | 66.7% |
| Co-development with creators | 80.0% | 71.4% | 66.7% |
| Commissioned creation | 20.0% | 28.6% | 22.2% |

**Source:** Organized by this survey study.
**Note:** Multiple responses were allowed, so the added percentage was greater than 100.

***Figure 2-8.*** Modes of game development for externally acquired content for Taiwan's gaming companies from 2019 to 2021 (multiple selections allowed)

### 1.2.4. Production (management) and outsourcing of Taiwan's gaming companies

"Game marketing" accounted for the biggest share (86.3%) of commercial operations undertaken by Taiwan's overall gaming sector, followed by "animation art" and "game testing," each accounting for 83.3%. For game developers, the highest proportion (100.0%) was devoted to "animation art," followed by "game engine" (94.1%) and "game operations" (76.5%). For game operation/agency/distribution companies, the biggest share was dedicated to "game marketing" (91.2%), followed by "game operation" and "customer support" (85.3%). "Sound effects and music" accounted for the lowest proportion, at 32.4%.

***Table 2-6.*** **Commercial operations of Taiwan's gaming industry in 2021 by type of main business**

| Business | Overall | | Game development | | Game operation/ agency/distribution | |
|---|---|---|---|---|---|---|
| | Number of companies | Per-centage | Number of companies | Per-centage | Number of companies | Per-centage |
| Total | 102 | 100.0 | 68 | 100.0 | 34 | 100.0 |
| Storyboard and script | 78 | 76.5 | 63 | 92.6 | 15 | 44.1 |
| Game engine | 76 | 74.5 | 64 | 94.1 | 12 | 35.3 |
| Animation art | 85 | 83.3 | 68 | 100.0 | 17 | 50.0 |
| Sound effects and music | 73 | 71.6 | 62 | 91.2 | 11 | 32.4 |
| Game testing | 85 | 83.3 | 61 | 89.7 | 24 | 70.6 |
| Game operation | 81 | 79.4 | 52 | 76.5 | 29 | 85.3 |
| Customer service | 80 | 78.4 | 51 | 75.0 | 29 | 85.3 |
| Game marketing | 88 | 86.3 | 57 | 83.8 | 31 | 91.2 |

**Source:** Organized by this survey study.

After excluding enterprises without the relevant business functions, the percentage of production (management) that was fully in-house was higher than the fully outsourced production (management) for various commercial operations. Most "storyboards and scripts" were fully produced in-house (82.1%), while "sound effects and music" were the least in-house produced business items (35.6%). Moreover, "sound effects and music" were also the most fully outsourced items, accounting for 17.8% of the total.

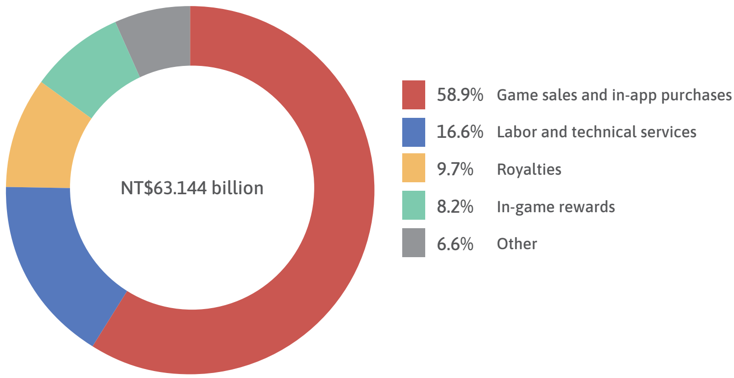
***Table 2-7.*** Overview of in-house and outsourced production (management) by Taiwan's gaming companies in 2021

| Business | Fully in-house produced (managed) | Mostly in-house produced (managed) | Half in-house produced and half outsourced | Mostly outsourced | Fully outsourced |
|---|---|---|---|---|---|
| Storyboard and script | 82.1% | 15.4% | 2.6% | 0.0% | 0.0% |
| Game engine | 80.3% | 14.5% | 3.9% | 1.3% | 0.0% |
| Animation art | 44.7% | 32.9% | 9.4% | 11.8% | 1.2% |
| Sound effects and music | 35.6% | 17.8% | 4.1% | 24.7% | 17.8% |
| Game testing | 72.9% | 14.1% | 9.4% | 3.5% | 0.0% |
| Game operation | 74.1% | 9.9% | 4.9% | 3.7% | 7.4% |
| Customer service | 66.3% | 10.0% | 6.3% | 5.0% | 12.5% |
| Game marketing | 55.7% | 18.2% | 13.6% | 8.0% | 4.5% |

**Source:** Organized by this survey study.

### 1.2.5. Revenue structure of Taiwan's gaming industry

The gaming industry's revenue in 2021 was NT$63.144 billion. In terms of income structure, "game sales and in-app purchases" accounted for 58.9% of the revenue, followed by "labor technical services," at 16.6%. Other revenue streams included the design and sale of peripheral products, the design and sale of electronic equipment, and so on.




**Source:** Organized by this survey study.

***Figure 2-9.*** Revenue structure of Taiwan's gaming industry in 2021

According to the breakdown of revenue by industry, game developers generated the most money from “game sales and in-app purchases” (18.6%), then “royalties” (18.6%), which accounted for a significantly higher proportion of overall revenue than for game operation/agency/distribution companies. “Game sales and in-app purchases” also accounted for the highest revenue for game operation/agency/distribution companies, followed by revenue from “labor technical services” (28.4%).

***Table 2-8.*** Revenue structure of Taiwan’s gaming industry in 2021 by type of main business

| Business item | Game development | Game operation/agency/ distribution |
|---|---|---|
| Game sales and in-app purchases | 61.2% | 56.8% |
| Labor and technical services | 3.8% | 28.4% |
| Royalties | 18.6% | 1.4% |
| Game points (in-game rewards) | 12.0% | 4.6% |
| Others | 4.4% | 8.7% |

**Source:** Organized by this survey study.

In terms of gaming company scales, “game sales and in-app purchases” accounted for the biggest percentage of revenue for all company scales, and the percentage was greater than 50%. “Labor technical services” was the next largest segment. Also, “royalties” made up a comparatively large part of the revenue of companies with a capital of more than NT$100 million. For enterprises with a capital of more than NT$500 million, revenue from “in-game rewards” made up a greater proportion of total revenue.

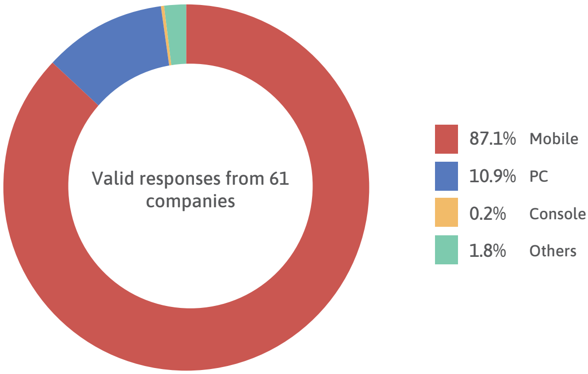
***Table 2-9.*** **Revenue structure of Taiwan’s gaming industry in 2021 by capital size**

| Business item | Less than NT$5 million | NT$5 million to NT$10 million (not inclusive) | NT$10 million to NT$100 million (not inclusive) | NT$100 million to NT$500 million (not inclusive) | Over NT$500 million |
|---|---|---|---|---|---|
| Game sales and in-app purchases | 78.3% | 60.9% | 86.6% | 68.7% | 57.8% |
| Labor and technical services | 16.5% | 29.7% | 9.9% | 21.0% | 16.3% |
| Royalties | 2.7% | 1.6% | 3.5% | 9.0% | 9.8% |
| Game points (in-game rewards) | 0.0% | 0.3% | 0.0% | 0.8% | 8.9% |
| Others | 2.5% | 7.5% | 0.0% | 0.5% | 7.2% |

**Source:** Organized by this survey study.

### 1.2.6 Revenue structure of game sales and in-app purchases - by device type

When the game and online revenue structure was broken down further by device type, "mobile games" (87.1%) accounted for the most revenue, followed by "PC games" (10.9%).

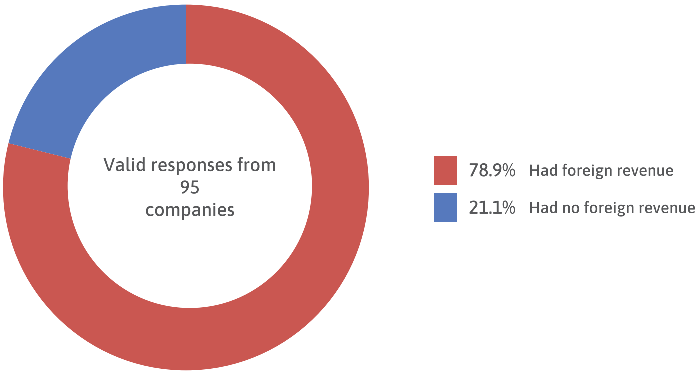



**Source:** Organized by this survey study.
**Note:**
Some companies have gaming and online revenues, but their revenue contribution cannot be distinguished further based on device type, hence the numbers above are mainly for reference.

***Figure 2-10.*** Game sales and in-app purchase revenue structure of Taiwan's gaming industry in 2021 by device type

### 1.2.7. Domestic and foreign revenue structure of Taiwan's gaming companies

In 2021, 78.9% of Taiwan's game industry had "foreign revenue," and 21.1% "had no foreign revenue."




**Source:** Organized by this survey study.

***Figure 2-11.*** Proportion of foreign revenue of Taiwan's gaming companies in 2021

When broken down by type of major business, the percentage of game operation/agency/distribution companies with "foreign revenue" was 83.9%, and game developers, 76.6%. In terms of capital size, practically all gaming companies with more than NT$100 million in capital had foreign revenue.

***Table 2-10.*** Proportion of foreign revenue of Taiwan's gaming companies in 2021 by type of main business and capital size

| Item | Had foreign revenue | Had no foreign revenue |
|---|---|---|
| Industry | | |
| Game development | 76.6% | 23.4% |
| Game operation/agency/distribution | 83.9% | 16.1% |
| Capital size | | |
| Less than NT$5 million | 58.6% | 41.4% |
| NT$5 million to NT$10 million (not inclusive) | 83.3% | 16.7% |
| NT$10 million to NT$100 million (not inclusive) | 66.7% | 33.3% |
| NT$100 million to NT$500 million (not inclusive) | 100.0% | 0.0% |
| NT$500 million or more | 95.5% | 4.5% |

**Source:** Organized by this survey study.

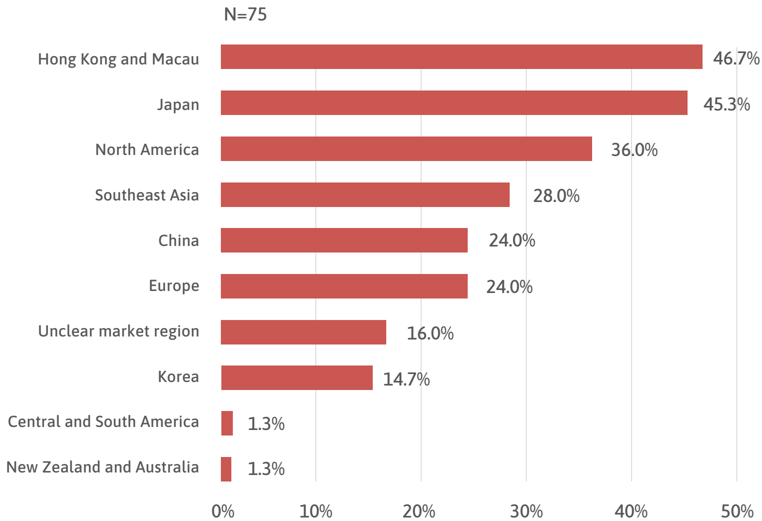
In terms of domestic and foreign revenue structures, the "domestic revenue" of the gaming industry in Taiwan was NT$38.602 billion in 2021, accounting for 60.6% of the total revenue. "Foreign revenue" was NT$24.542 billion, accounting for 39.4% of total revenue.

***Table 2-11.*** Domestic and foreign revenue of Taiwan's gaming products in 2021

| Item | Domestic ratio | Foreign ratio |
|---|---|---|
| Overall revenue (NT$100 million) | 386.02 | 245.42 |
| Percentage | 60.6% | 39.4% |

**Source:** Organized by this survey study.

The leading foreign revenue markets were "Hong Kong and Macau" and "Japan," accounting for 46.7% and 45.3%, respectively, followed by "North America", at 36.0%.

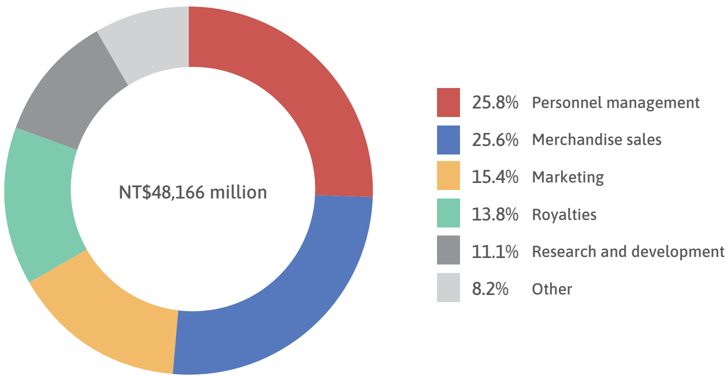



**Source:** Organized by this survey study.
**Note:** Multiple responses were allowed, so the added percentage was greater than 100.

***Figure 2-12.*** Foreign market of Taiwan's gaming industry in 2021 by regional distribution (multiple selections allowed)

## 1.2.8. Expenditure structure of Taiwan's gaming industry

The total expenditure of the gaming industry in 2021 was NT$48,166 million. In terms of expenditure structure, "personnel management" expenditure accounted for the largest share, 25.8%, and "merchandise sales" expenditure accounted for the second-largest share, 25.6%. "Other" expenditures included servers, dedicated lines for the internet, rent, materials, utilities, payment collection on behalf of others, etc.




**Source:** Organized from this survey study.

***Figure 2-13.*** Expenditure structure of Taiwan's gaming industry in 2021

In terms the breakdown of spending by industry, game developers spent the most on "personnel management" (36.7%), followed by "merchandise sales" (22.6%) and "research and development" (22.1%). Game operation/agency/distribution companies had the highest expenditure on "merchandise sales" (27.5%), followed by royalties (22.6%).

***Table 2-12.*** **Expenditure structure of Taiwan's gaming industry in 2021 by type of main business**

| Expenditure item | Game development | Game operation/agency/ distribution |
| --- | --- | --- |
| Merchandise sales | 22.6% | 27.5% |
| Royalties | 0.1% | 22.6% |
| Marketing | 17.4% | 14.2% |
| Personnel management | 36.7% | 18.8% |
| Research and development | 22.1% | 4.1% |
| Other | 1.1% | 12.8% |

**Source:** Organized by this survey study.

As for companies of varying scales of operation, those with capital under NT$100 million spent the most on "personnel management," with the proportion being over 50%. For those with capital of over NT$100 million, the proportions of expenses for "merchandise sales" and "royalties" both  increased significantly.

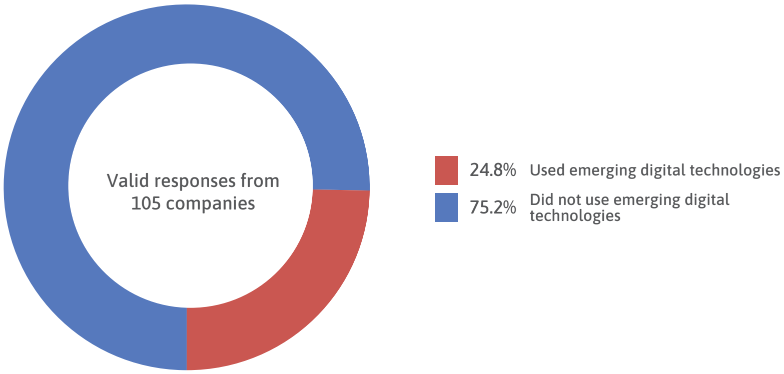
***Table 2-13.*** **Expenditure structure of Taiwan's gaming industry in 2021 by capital size**

| Expenditure structure | Less than NT$5 million | NT$5 million to NT$10 million (not inclusive) | NT$10 million to NT$100 million (not inclusive) | NT$100 million to NT$500 million (not inclusive) | Over NT$500 million |
| --- | --- | --- | --- | --- | --- |
| Merchandise sales | 2.8% | 11.9% | 0.9% | 46.4% | 24.0% |
| Royalties | 0.0% | 0.0% | 0.0% | 7.1% | 14.5% |
| Marketing | 5.0% | 10.4% | 1.2% | 16.7% | 15.4% |
| Personnel management | 59.0% | 62.1% | 80.3% | 25.1% | 25.6% |
| Research and development | 30.6% | 11.3% | 15.1% | 3.9% | 11.7% |
| Other | 2.6% | 4.4% | 2.4% | 0.9% | 8.9% |

**Source:** Organized by this survey study.

### 1.2.9. Application of emerging digital technology in Taiwan's gaming industry

The percentage of companies that "used emerging digital technologies" (metaverse, NFT, machine learning, AR/VR, 3D real-time scanning, 5G, LBS, etc.) was 24.8%, while the percentage of companies that "did not use emerging digital technologies" was 75.2%.




**Source:** Organized by this survey study.

***Figure 2-14.*** Overview of emerging digital technology adoption in Taiwan's gaming industry in 2021

By main business, the percentage of game developers with emerging digital technology applications was 30%, higher than that of game operation/agency/distribution companies (14.3%). By capital size, the proportion of gaming companies with capital of "NT$500 million or more" that utilized emerging digital technologies was the highest (40.9%).

***Table 2-14.*** **Adoption of emerging digital technology by Taiwan's gaming companies in 2021 by type of main business and capital size**

| Item | Used emerging digital technologies | Did not use emerging digital technologies |
|---|---|---|
| Industry | | |
| Game development | 30.0% | 70.0% |
| Game operation/agency/distribution | 14.3% | 85.7% |
| Capital size | | |
| Less than NT$5 million | 21.6% | 78.4% |
| NT$5 million to NT$10 million (not inclusive) | 14.3% | 85.7% |
| NT$10 million to NT$100 million (not inclusive) | 23.8% | 76.2% |
| NT$100 million to NT$500 million (not inclusive) | 16.7% | 83.3% |
| NT$500 million or more | 40.9% | 59.1% |

**Source:** Organized by this survey study.

The emerging digital technology with the most applications were VR (12 cases), AR (10 cases), NFT (9 cases), etc.

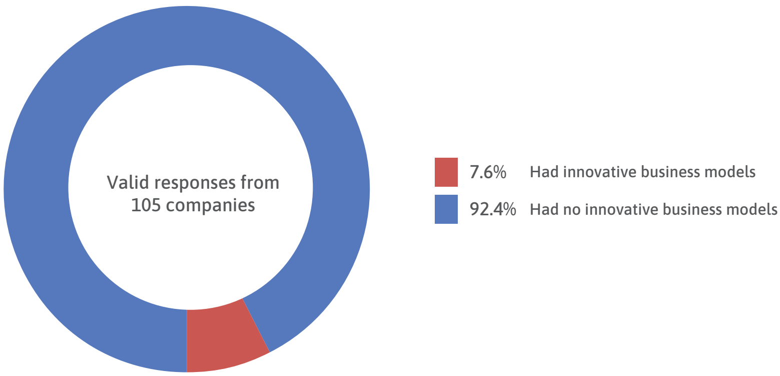
***Table 2-15.*** **Emerging digital technologies applied by Taiwan's gaming companies in 2021**

| Emerging digital technology | Number of companies adopting the technology |
|---|---|
| VR | 12 |
| AR | 10 |
| NFT | 9 |
| Metaverse | 3 |
| 5G | 3 |
| Cloud computing technology | 2 |
| AI | 2 |
| MR | 2 |
| Motion capture | 2 |
| Motion sensing | 2 |
| Web3.0 | 2 |
| Blockchain | 2 |
| Next generation game engine development | 1 |
| XR | 1 |
| Location tracking | 1 |
| Real-time data storage technology | 1 |
| High-speed multi-layer scrolling illustration engine | 1 |
| Console related technology | 1 |
| Machine learning | 1 |
| Big data | 1 |
| UnrealEngine 4 | 1 |
| 3D game engine | 1 |
| VTube | 1 |
| Object imaging | 1 |
| Real time 3D scanning | 1 |
| Cryptocurrency | 1 |
| System services, cloud analytics, and social platform function integration | 1 |

**Source:** Organized by this survey study.

### 1.2.10. Business model innovation in Taiwan's gaming industry

Business model innovation includes creating niche markets, reviving and licensing old intellectual property, using blockchain technology, combining online and offline sales and exhibitions, integrating cash flow (payment) services, and so on. Those who "had innovative business models" (such as IP revitalizations, cyber-physical integrations, VTubing, etc.) accounted for 7.6%, while those who "had no innovative business models" accounted for 92.4%.




**Source:** Organized by this survey study.

***Figure 2-15.*** Overview of business model innovation in Taiwan's gaming companies in 2021

After differentiating by main business, the percentage of game operation/agency/distribution companies that "had innovative business models" was 11.5%, higher than that of game developers (5.7%). After distinguishing by capital size, the proportion of gaming companies with capital of "NT$500 million or more" that "had innovative business models" was the highest (40.9%).



**_Table 2-16._** Business model innovation by Taiwan's gaming companies in 2021 by type of main business and capital size

| Item | Had innovative business models | Had no innovative business models |
|---|---|---|
| Industry | | |
| Game development | 5.7% | 94.3% |
| Game operation/agency/distribution | 11.4% | 88.6% |
| Capital size | | |
| Less than NT$5 million | 8.1% | 91.9% |
| NT$5 million to NT$10 million (not inclusive) | 0.0% | 100.0% |
| NT$10 million to NT$100 million (not inclusive) | 4.8% | 95.2% |
| NT$100 million to NT$500 million (not inclusive) | 5.6% | 94.4% |
| NT$500 million or more | 13.6% | 86.4% |

**Source:** Organized by this survey study.

The following table summarizes the application of innovative business models by Taiwan's gaming companies in 2021.

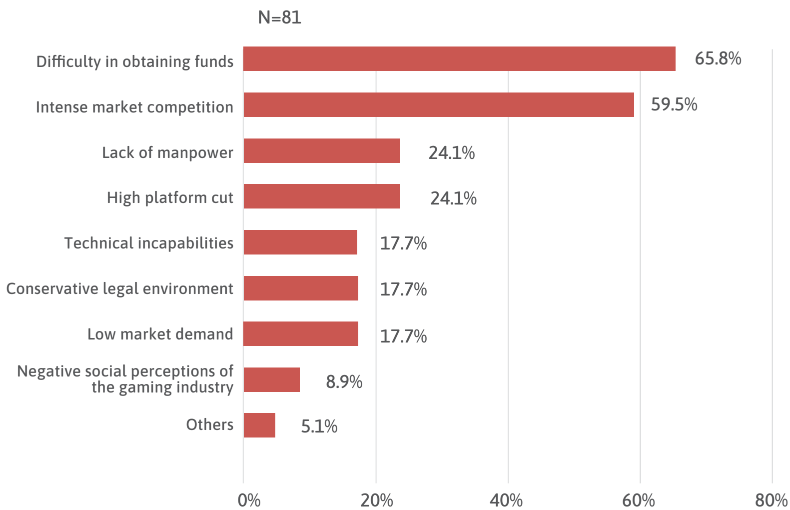
***Table 2-17.*** Innovative business models applied by Taiwan's gaming companies in 2021

| Business model innovation | Number of companies adopting this model |
|---|---|
| Subscription services | 1 |
| Amazon Web Services (AWS) and motion technology | 1 |
| Kirabase anime and manga showroom | 1 |
| Game themed café | 1 |
| Cyber-physical integration | 1 |
| Authentication upgrade and multi-tier membership system | 1 |
| Cash flow (payment) services integration | 1 |
| Development of advertising technology platform | 1 |
| Using AI and big data analytics to improve advertising effectiveness | 1 |
| Revitalization and recycling of IPs | 1 |
| Blockchain technology | 1 |
| VTubing | 1 |
| Integrating in-game rewards, payment, and e-commerce to create a holistic mobile lifestyle platform | 1 |

**Source:** Organized by this survey study.

### 1.2.11. Business status of Taiwan's gaming enterprises

Out of the 81 valid responses, 79 said they were having "operational difficulties," while only two said there were "no difficulties." "Funding difficulties" accounted for 65.8% of the challenges encountered, followed by "intense market competition" (59.5%), and "lack of manpower (art and engineering talents)". Additional operational challenges were the government's foreign taxation issue, costly advertising expenses, the difficulty in predicting the releasing timelines of games, and a dual-platform market monopoly, among others.




**Source:** Organized by this survey study.
**Note:** Multiple responses were allowed, so the added percentage was greater than 100.

***Figure 2-16.*** Operational difficulties faced by Taiwan's gaming companies in 2021 (multiple selections allowed)

After differentiating by main industry, the percentage of game developers facing "difficulties in obtaining funds" was the highest, accounting for 79.3%. This was followed by "intense market competition" (48.3%). As for game operation/agency/distribution companies, "intense market competition" accounted for the highest percentage(90.5%), followed by "high platform cut " (52.4%).'

***Table 2-18.*** **Operational difficulties faced by Taiwan's gaming companies in 2021 (multiple selections allowed) by type of main business**

| Difficulty faced | Game development | Game operation/ agency/distribution |
|---|---|---|
| Difficulty in obtaining funds | 79.3% | 28.6% |
| Intense market competition | 48.3% | 90.5% |
| Low market demand | 15.5% | 23.8% |
| Conservative legal environment | 10.3% | 38.1% |
| High platform cut | 13.8% | 52.4% |
| Negative social perceptions of the gaming industry | 3.4% | 23.8% |
| Technical incapabilities | 17.2% | 19.0% |
| Lack of manpower | 24.1% | 23.8% |

**Source:** Organized by this survey study.

By capital scale, the main problem for those with less than NT$10 million in capital was "difficulty in obtaining funds." This was especially apparent, as 93.8% of the companies with capital "less than NT$5 million" were facing this problem. The main challenge for those with capital over NT$100 million was "intense market competition," with 88.9% of those with capital over NT$500 million facing this problem. In addition, the proportion of companies with capital of over NT$100 million facing the problem of "lack of manpower" has increased significantly.

***Table 2-19.*** **Operational difficulties faced by Taiwan's gaming companies in 2021 (multiple selections allowed) by capital size**

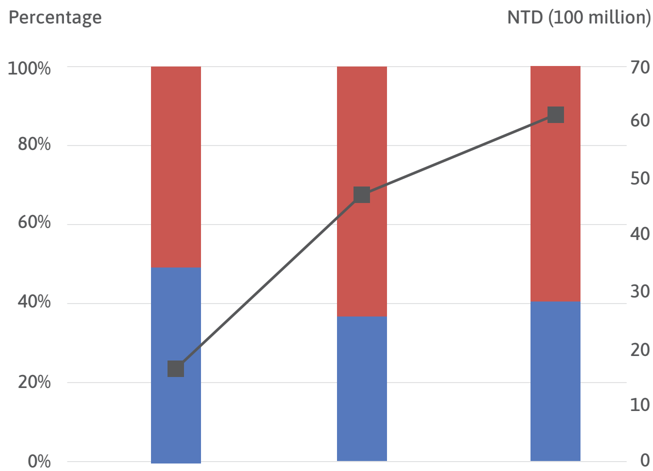
| Difficulties | Less than NT$5 million | NT$5 million to NT$10 million (not inclusive) | NT$10 million to NT$100 million (not inclusive) | NT$100 million to NT$500 million (not inclusive) | NT$500 million or more |
|---|---|---|---|---|---|
| Difficulty in obtaining funds | 93.8% | 85.7% | 46.7% | 58.3% | 22.2% |
| Intense market competition | 50.0% | 71.4% | 73.3% | 58.3% | 88.9% |
| Low market demand | 18.8% | 0.0% | 40.0% | 8.3% | 11.1% |
| Conservative legal environment | 18.8% | 0.0% | 20.0% | 33.3% | 11.1% |
| High platform cut | 15.6% | 14.3% | 40.0% | 25.0% | 44.4% |
| Negative social perceptions of the gaming industry | 6.3% | 14.3% | 13.3% | 16.7% | 0.0% |
| Technical incapabilities | 25.0% | 14.3% | 13.3% | 25.0% | 0.0% |
| Lack of manpower | 18.8% | 14.3% | 13.3% | 41.7% | 55.6% |

**Source:** Organized by this survey study.

## 1.3. IP Licensing Trends

### 1.3.1. Taiwan's gaming industry licensing revenue, region, and type

Royalty revenue for the gaming industry was approximately NT$6.124 billion in 2021, an increase of NT$1.425 billion from NT$4.699 billion in 2020. In 2019, in terms of the contribution to licensing revenue, domestic and foreign markets were close to equal. However, the income share of foreign markets rose to 63.2% in 2020 and dropped slightly to 59.8% in 2021.

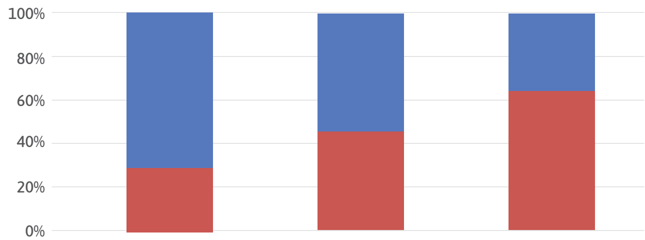



| Revenue | 2019 | 2020 | 2021 |
|---|---|---|---|
| Percentage of foreign licensing | 51.3% | 63.2% | 59.8% |
| Percentage of domestic licensing | 48.7% | 36.8% | 40.2% |
| Licensing revenue | 16.89 | 46.99 | 61.24 |

**Source:** Organized and estimated by this survey study.

***Figure 2-17.*** Licensing revenue of Taiwan's gaming industry from 2019 to 2021

License sales in gaming have shown a growing trend over the years. The percentage of companies that "sold game licenses" was 64.8% in 2021, 19.1 percentage points higher than in 2020.

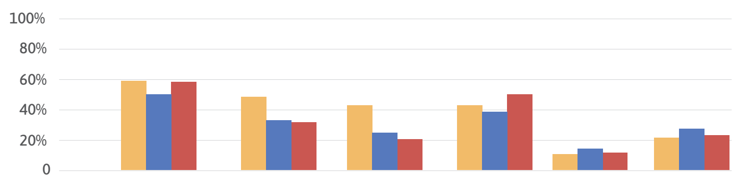



| Game license sales | 2019 | 2020 | 2021 |
|---|---|---|---|
| Did not sell game license | 71.6% | 54.3% | 35.2% |
| Sold game licenses | 28.4% | 45.7% | 64.8% |

**Source:** Organized by this survey study.

***Figure 2-18.*** **Overview of license sales by Taiwan's gaming companies from 2019 to 2021**

As for the regions where licenses were sold, "domestic" was more common from 2019 to 2021, accounting for 57.9% in 2019, 48.6% in 2020, and 57.1% in 2021. In 2021 "Japan" came as the second highest destination, accounting for 48.6%, followed by "China" at 31.4%. "Other" regions included Europe, America, Southeast Asia, etc.

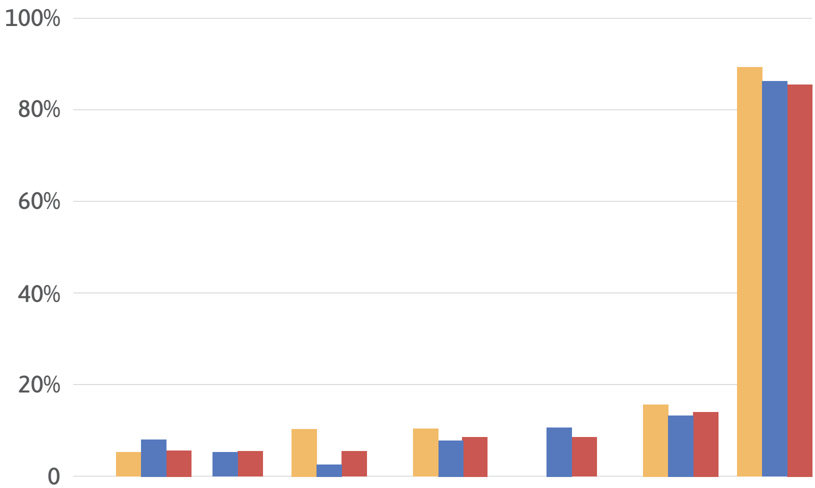



| Year | Domestic | China | Hong Kong and Macau | Japan | Korea | Other |
|---|---|---|---|---|---|---|
| 2019 | 57.9% | 47.4% | 42.1% | 42.1% | 10.5% | 21.1% |
| 2020 | 48.6% | 32.4% | 24.3% | 37.8% | 13.5% | 27.0% |
| 2021 | 57.1% | 31.4% | 20.0% | 48.6% | 11.4% | 22.8% |

**Source:** Organized by this survey study.
**Note:** Multiple responses were allowed, so the added percentage was greater than 100.

***Figure 2-19.*** **License sales by Taiwan's gaming companies from 2019 to 2021 by percentage of sales region (multiple selections allowed)**

From 2019 to 2021, “game” licenses were the dominant form of content sold, accounting for 89.5% of sales in 2019, 86.5% in 2020, and 85.7% in 2021. The rest of the licensed content each accounted for less than 15% in 2021. “Novels” made up 14.3%, “television shows”, 8.6%, and, “manga and anime”, 8.6%.

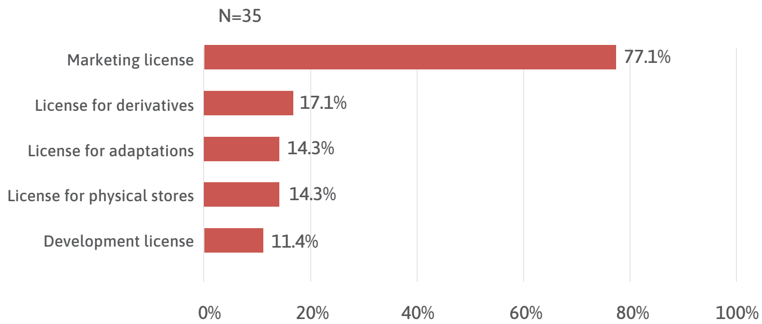



| Year | Films | Music | Character brands | Manga and anime | Television shows | Novels | Games |
|---|---|---|---|---|---|---|---|
| 2019 | 5.3% | 0.0% | 10.5% | 10.5% | 0.0% | 15.8% | 89.5% |
| 2020 | 8.1% | 5.4% | 2.7% | 8.1% | 10.8% | 13.5% | 86.5% |
| 2021 | 5.7% | 5.7% | 5.7% | 8.6% | 8.6% | 14.3% | 85.7% |

**Source:** Organized by this survey study.
**Note:** Multiple responses were allowed, so the added percentage was greater than 100.

***Figure 2-20.*** License sales by Taiwan’s gaming companies from 2019 to 2021 by percentage of content type (multiple selections allowed)

In 2021, the forms of licenses sold by gaming companies were mainly “marketing license,” accounting for 77.1%, followed by “license for derivative works” (17.1%), “license for adaptations” (14.3%), and “license for physical stores” (14.3%).

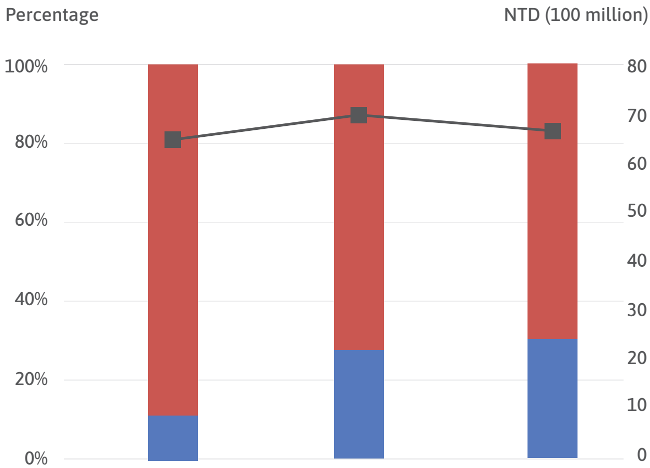



**Source:** Organized by this survey study.
**Note:** Multiple responses were allowed, so the added percentage was greater than 100.

***Figure 2-21.*** Forms of licenses sold by Taiwan’s gaming companies in 2021 (multiple selections allowed)

## 1.3.2. Taiwan's gaming industry licensing expenditure, region, and type

The gaming industry's "licensing expenditure" was about NT$6.653 billion in 2021, down by 4.47%, from NT$6.964 billion in 2020. Between 2019 and 2021, the amount spent on foreign licenses was higher than the amount spent on domestic licenses. Foreign licensing expenditure accounted for 89.2% of the total licensing expenditure in 2019, 73% in 2020, and 70.5% in 2021.

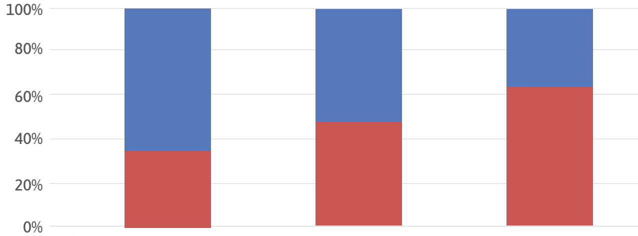



| Expenditure | 2019 | 2020 | 2021 |
|---|---|---|---|
| Percentage of foreign licensing | 89.2% | 73.0% | 70.5% |
| Percentage of domestic licensing | 10.8% | 27.0% | 29.5% |
| Licensing expenditure | 64.68 | 69.64 | 66.53 |

**Source:** Organized by this survey study.

***Figure 2-22.*** Licensing expenditure of Taiwan's gaming industry from 2019 to 2021

In terms of license acquisition by Taiwan's gaming companies, there has been an upward trend over the years. The percentage of those that "had purchased licenses" in 2021 was 63%, an increase of 16.1% from 2020.

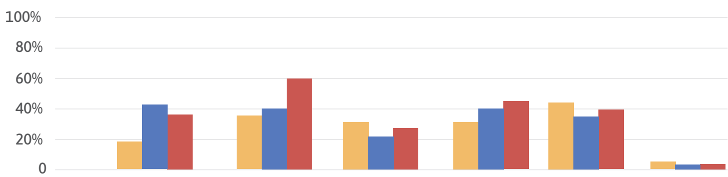



| License acquisition | 2019 | 2020 | 2021 |
|---|---|---|---|
| Had purchased licenses | 65.7% | 53.1% | 37.0% |
| Did not purchase licenses | 34.3% | 46.9% | 63.0% |

**Source:** Organized by this survey study.

***Figure 2-23.*** Overview of license acquisition by Taiwan's gaming companies from 2019 to 2021

Among the regions where licenses were purchased, 58.8% of the licenses were purchased from "China" in 2021, which was a significant increase from 2020 (39.5%), followed by "Japan" at 44.1% and "Korea", at 38.2%.

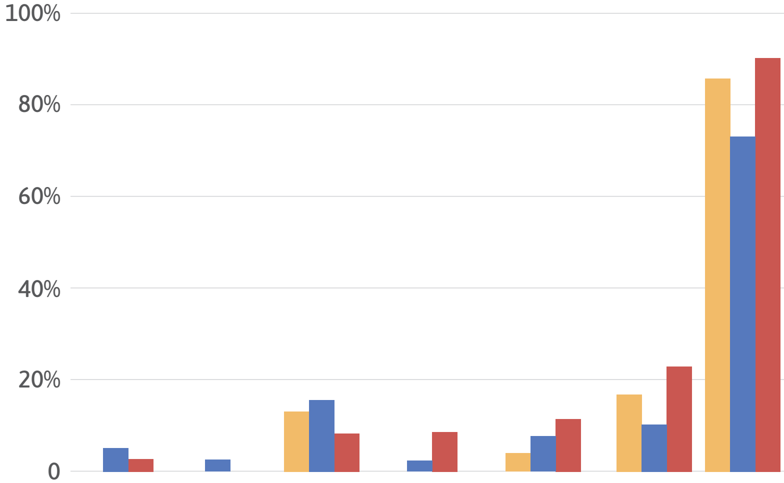



| Year | Domestic | China | Hong Kong and Macau | Japan | Korea | Other |
|---|---|---|---|---|---|---|
| 2019 | 17.4% | 34.8% | 30.4% | 30.4% | 43.5% | 4.3% |
| 2020 | 42.1% | 39.5% | 21.1% | 39.5% | 34.2% | 2.6% |
| 2021 | 35.3% | 58.8% | 26.5% | 44.1% | 38.2% | 2.9% |

**Source:** Organized by this survey study.
**Note:** Multiple responses were allowed, so the added percentage was greater than 100.

***Figure 2-24.*** License acquisition by Taiwan's gaming companies from 2019 to 2021 by percentage of source region (multiple selections allowed)

License acquisition by Taiwan's gaming companies was predominantly "game licenses" from 2019 to 2021, accounting for 87% in 2019, 73.7% in 2020, and 91.2% in 2021. The rest of the licensed content in 2021 each accounted for less than 25%, including "manga and anime" (23.5%), "character brands" (11.8%), and "novels" (8.8%). Other licensed content accounted for 2.9%, which included character portrait rights, Budaixi (glove puppetry), etc.




| Year | Other | Television shows | Novels | Music | Character brands | Manga and anime | Games |
|---|---|---|---|---|---|---|---|
| 2019 | 0.0% | 0.0% | 13.0% | 0.0% | 4.3% | 17.4% | 87.0% |
| 2020 | 5.3% | 2.6% | 15.8% | 2.6% | 7.9% | 10.5% | 73.7% |
| 2021 | 2.9% | 0.0% | 8.8% | 8.8% | 11.8% | 23.5% | 91.2% |

**Source:** Organized by this survey study.

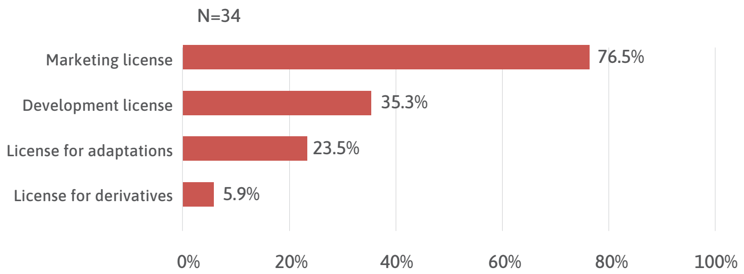
**Notes:**

❶Multiple responses were allowed, so the added percentage was greater than 100.

❷Other content included character portrait rights, Budaixi (glove puppetry), etc.

***Figure 2-25.*** License acquisition by Taiwan's gaming companies from 2019 to 2021 by percentage of content type (multiple selections allowed)

In 2021, the forms of licenses purchased by gaming companies were mainly “marketing license,” accounting for 76.5%, followed by “development license” (35.3%), “license for adaptations” (23.5%), and “license for derivatives” (5.9%).

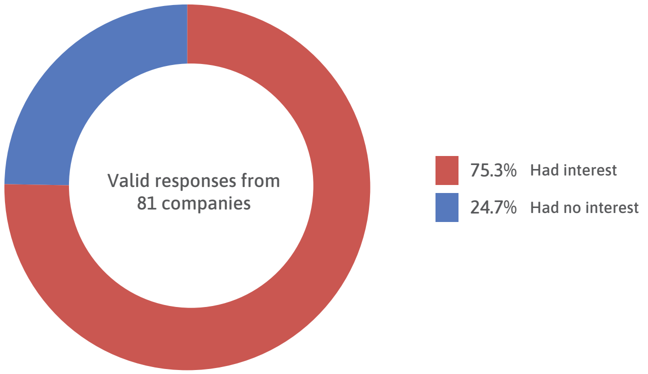



**Source:** Organized by this survey study.
**Note:** Multiple responses were allowed, so the added percentage was greater than 100.

***Figure 2-26.*** Forms of licenses purchased by Taiwan’s gaming companies in 2021 (multiple selections allowed)

### 1.3.3. Adaptation preferences of Taiwan's gaming companies

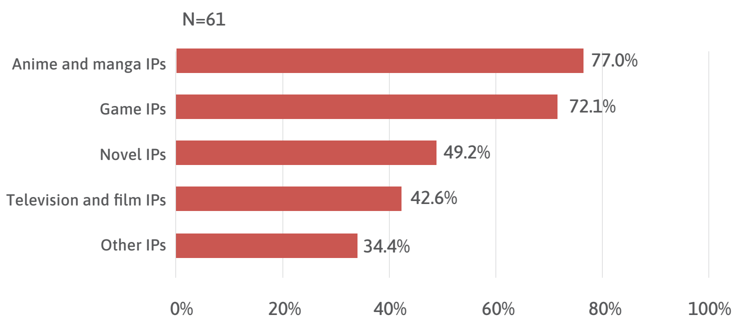
In 2021, 75.3% of Taiwan's gaming companies were interested in adapting other forms of cultural content (e.g., television/movies, novels, anime, etc.) into games.




**Source:** Organized by this survey study.

***Figure 2-27.*** Interest in adapting other culture contents into games by Taiwan's gaming companies

"Anime IPs" (such as Zhuge Shiro, Granny Fruity, PATAAUW, etc.) accounted for 77.0% of the works adapted, while "game IPs" (such as classic game IPs, PC game porting, sequels, etc.) accounted for 72.1%.




**Note:** Multiple responses were allowed, so the added percentage was greater than 100.

***Figure 2-28.*** Types of works Taiwan's gaming companies in 2021 wanted to adapt (multiple selections allowed)

As for companies with varying capital sizes, the top two types of works for adaptation were "anime IPs" and "game IPs." Over 50% of companies with less than NT$100 million in capital were interested in adapting "television and film IPs." However, the number of companies interested in adapting dropped dramatically among firms with capital exceeding NT$100 million.

***Table 2-20.*** Types of works Taiwan's gaming companies in 2021 wanted to adapt (multiple selections allowed) by capital size

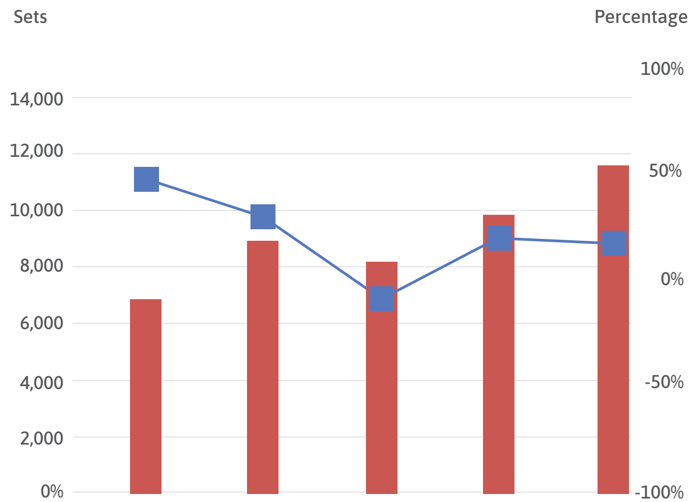
| Type of content | Less than NT$5 million | NT$5 million to NT$10 million (not inclusive) | NT$10 million to NT$100 million (not inclusive) | NT$100 million to NT$500 million (not inclusive) | Over NT$500 million |
|---|---|---|---|---|---|
| Novel IPs | 58.3% | 50.0% | 50.0% | 25.0% | 42.9% |
| Television and film IPs | 58.3% | 50.0% | 58.3% | 12.5% | 14.3% |
| Anime and manga IPs | 83.3% | 66.7% | 66.7% | 87.5% | 71.4% |
| Game IPs | 70.8% | 83.3% | 75.0% | 75.0% | 100.0% |
| Other IPs | 37.5% | 33.3% | 50.0% | 25.0% | 14.3% |

**Source:** Organized by this survey study.

# 1.4. Industry Observation Indexes

## 1.4.1. Number of games released on Steam

Driven by the pandemic, the volume of games released on Steam has been on an upward trend since 2019, with the growth rate of game releases in 2020 and 2021 each exceeding 10% and the number of releases topping 10,000 sets of games in 2021.

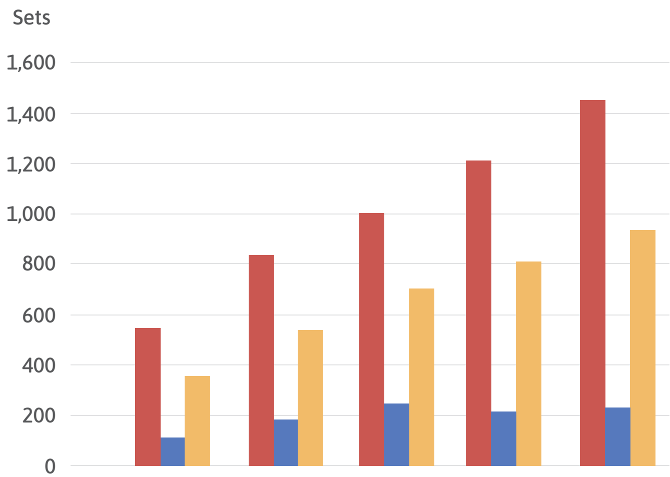



| Type | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|
| Number of games | 6,859 | 8,924 | 8,172 | 9,832 | 11,580 |
| Growth rate | 46.5% | 30.1% | -8.4% | 20.3% | 17.8% |

**Source:** SteamDB.

***Figure 2-29.*** Number of games released on Steam from 2017 to 2021

In terms of the number of games supporting Traditional Chinese interface or subtitles, the number has shown a year-on-year growth trend since 2017, with 1,457 games supporting Traditional Chinese interface in 2021, up 20% from 2020, and 940 games supporting Traditional Chinese subtitles, up 16.2% from 2020. The number of games with traditional Chinese characters that came out between 2019 and 2020 fell by 13.2%, but after 2019, it stayed at over 200 sets per year.




| Type | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|
| Supports Traditional Chinese interface | 551 | 839 | 1,008 | 1,214 | 1,457 |
| Supports Traditional Chinese voice overs | 111 | 182 | 250 | 217 | 230 |
| Supports Traditional Chinese subtitles | 359 | 538 | 699 | 809 | 940 |

**Source:** SteamDB.
**Note:** Multiple responses were allowed, so the added percentage was greater than 100.

***Figure 2-30.*** Number of Traditional Chinese games released on Steam from 2017 to 2021

## 1.4.2 Ranking of mobile game downloads and user spending

In terms of global downloads, the most downloaded game in 2021 was *Garena's Garena Free Fire*, a battle royale survival shooting game, surpassing the original battle royale survival shooting game *PUBG*. This was followed by the parkour action game *Subway Surfers* and the sandbox simulation game *Roblox*. The top three games in terms of global user spending were *Roblox, Genshin Impact*, and *Coin Master*. The most downloaded game in Taiwan was the parkour game *Ninja Must Die*, followed by *PUBG: New State* and the casual game *Coin Master*. The top three games in terms of user spending were *Lineage M*, *Coin Master*, and *Xingcheng Online*.

***Table 2-21.*** **Ranking of mobile game downloads and user spending in the global and Taiwan markets in 2021**

| Market / Rank | | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| Global | Downloads | *Garena Free Fire* (Survival shooter) | *Subway Surfers* (Action) | *Roblox* (Sandbox simulation) | *Bridge Race* (Super casual) | *Candy Crush Saga* (Casual) |
| | User spending | *Roblox* (Sandbox simulation) | *Genshin Impact* (ARPG) | *Coin Master* (Casual) | *Honor of Kings* (MOBA) | *Candy Crush Saga* (Casual) |
| Taiwan | Downloads | *Ninja Must Die* (Action) | *PUBG: New State* (Survival shooter) | *Coin Master* (Casual) | *Arena of Valor* (MOBA) | *Harry Potter: Magic Awakened* (RPG) |
| | User spending | *Lineage M* (MMORPG) | *Coin Master* (Casual) | *Xingcheng Online* (Board and card games) | *Sangokushi. Tactics* (Simulation) | *Lineage 2M* (MMORPG) |

**Source:** Data.ai.

The top 10 mobile games in terms of user spending in Taiwan in 2021 were mostly “MMORPG” games. In terms of domestically produced games, the top 10 were all “board and card games.”

***Table 2-22.*** Top 10 mobile games in Taiwan in 2021 by user spending

| All games | | | |
|---|---|---|---|
| Rank | Game title | Game genre | Country |
| 1 | Lineage M | MMORPG | Korea |
| 2 | Coin Master | Casual | Israel |
| 3 | Xingcheng Online | Board and card games | Taiwan |
| 4 | Sangokushi.Tactics | Simulation | China |
| 5 | Lineage 2M | MMORPG | Korea |
| 6 | Arena of Valor | MOBA | China |
| 7 | Ragnarok X: Next Generation | MMORPG | Korea |
| 8 | Majiang Mingxing 3 Que 1 | Board and card games | Taiwan |
| 9 | Guardians of Cloudia | MMORPG | China |
| 10 | Lineage W | MMORPG | Korea |
| Domestically produced | | | |
| Rank | Game title | Game genre | Country |
| 1 | Xingcheng Online | Board and card games | Taiwan |
| 2 | Majiang Mingxing 3 Que 1 | Board and card games | Taiwan |
| 3 | Bao Ni Fa Yule Cheng | Board and card games | Taiwan |
| 4 | Jin Haoyun Yule Cheng | Board and card games | Taiwan |
| 5 | GodGame Mahjhong | Board and card games | Taiwan |
| 6 | ManganDahen Casino | Board and card games | Taiwan |
| 7 | Laozi You Qian | Board and card games | Taiwan |
| 8 | Hao Shen Yule Cheng | Board and card games | Taiwan |
| 9 | Let’s Vegas Slots and Pokies | Board and card games | Taiwan |
| 10 | Cash7 | Board and card games | Taiwan |

**Source:** APP Magic

# 02

# Esports Industry

## 2.1. Overall Industry Profile

### 2.1.1. Taiwan esports industry relationship map

The esports industry uses video games that are competitive in nature to hold competitions. Participants are pitted against one another in a battle of wits and will compete under the same rules and in a limited amount of time. Multiplayer online battle arena (MOBA) games such as *League of Legends, Mobile Legends: Bang Bang*, and *Honor of Kings* are examples. Another example is battle royale (BR) games. *PUBG, Free Fire, and Apex Legends* are among them. Among the first-person shooters are *CS: GO* and *VALORANT*. Among the card games is *Hearthstone*. *StarCraft 2, Age of Empires, and Warcraft 3* are examples of real-time strategy games. Racing games consist of *KartRider* and others.

The main entities responsible for arranging and executing esports events are the esports event companies, which also organize hosts, broadcasters, and umpires. Examples of representative companies are 4Gamers, Carry Live, and TESL. Individuals or esports teams, such as Flash Wolves, PSG Talon, Beyond Gaming, and others, compete in esports games. Esports teams are made up of players, coaches, support staff, and administrative teams, as well as esports talent training programs like Extreme Esports. Following a tournament, fans are reached by esports media, which includes TV stations, live streams, and social platforms. Tournaments or team owners can acquire resources and funding from esports hardware and sponsors during the hosting and viewership of these events through title sponsorship and commercial partnerships.

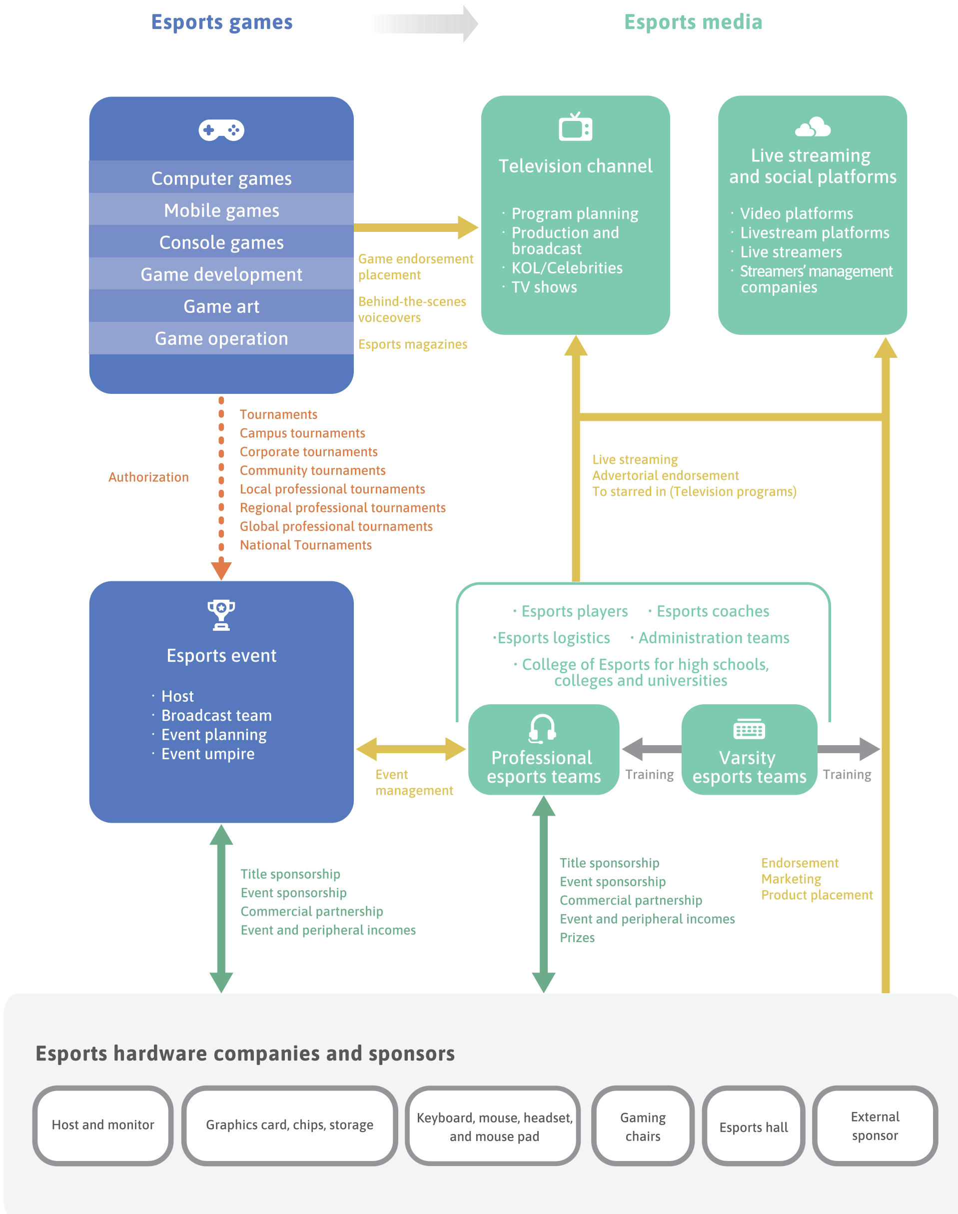
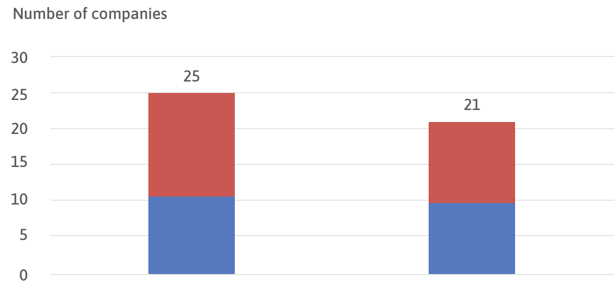



***Figure 2-31.*** Taiwan's esports indu stry map

## 2.1.2. Number of companies in Taiwan's esports industry

In 2021, the survey included 21 esports companies, including 11 esports teams, three fewer than in 2020. There were 10 esports event companies, one fewer than in 2020.




| Industry | 2020 | 2021 |
|---|---|---|
| Esports teams | 14 | 11 |
| Esports event companies | 11 | 10 |

**Source:** Organized by this survey study.
**Notes:**
❶Since there are no tax and industry codes that directly correspond to the sub-sectors of the gaming and esports industries, the list of gaming industry players is made up of survey participants from previous years, the Chinese Taipei Esports Association, professional esports teams and event information, as well as data from the PCS, GCS, LSC, ACS, and VALORANT tournaments.
❷Since there are no tax and industry codes that directly correspond to the sub-sectors of the gaming and esports industries, industry classification is based on the main businesses or service items registered by the interviewed industry players, as well as businesses that accounted for a higher percentage of revenue.
❸Including four gaming industry companies. The number of employees is combined with the parent company.

***Figure 2-32.*** Number of Taiwan's esports companies surveyed from 2020 to 2021

### 2.1.3. Capital scale of Taiwan's esports companies

In 2021, the proportion of esports tournament organizations with a capital scale of "less than NT$5 million" was the same as those with a capital scale of "more than NT$10 million," indicating a polarized capital distribution in the industry. The percentage of esports teams with a capital of "less than NT$5 million" was 63.6%, and they were mostly small enterprises.

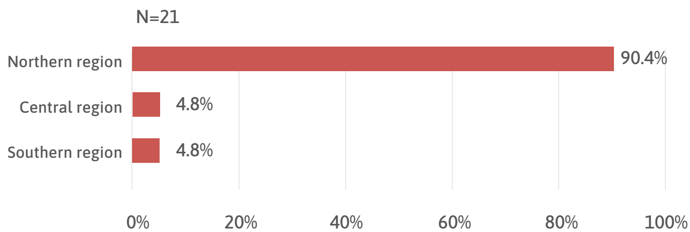
***Table 2-23.*** Capital size of sub-sectors in Taiwan's esports industry in 2021

| Capital | Esports games | Esports teams |
|---|---|---|
| Number of companies | 10 | 11 |
| Less than NT$1 million | 10.0% | 27.3% |
| NT$1 to NT$5 million (not inclusive) | 40.0% | 36.4% |
| NT$5 million to NT$10 million ( not inclusive ) | 0.0% | 18.2% |
| NT$10 million to NT$50 million ( not inclusive ) | 10.0% | 9.1% |
| NT$50 million or more | 40.0% | 9.1% |

**Source:** Organized by this survey study.

### 2.1.4. Regional distribution of Taiwan's esports companies

By region, esports companies are mainly concentrated in the "northern region," accounting for 90.4%, while the central and southern regions each account for 4.8%.



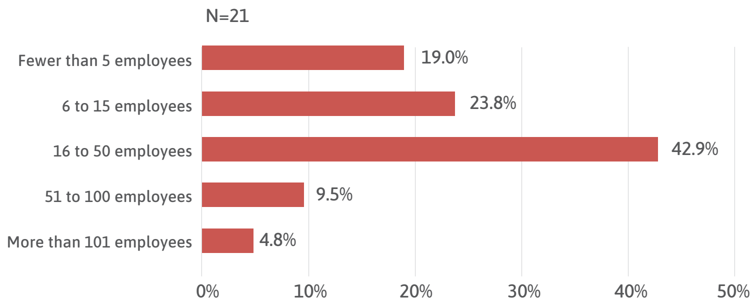

**Source:** Organized by this survey study.
**Notes:**
The northern region included Taipei City, New Taipei City, Keelung City, Taoyuan City, Hsinchu City, Hsinchu County, and Yilan County; the central region included Miaoli County, Taichung City, Changhua County, Nantou County, and Yunlin County; and the southern region included Chiayi County, Chiayi County City, Tainan City, Kaohsiung City, and Pingtung County.

***Figure 2-33.*** Regional distribution of Taiwan's esports companies in 2021

### 2.1.5. Number of employees in Taiwan's esports companies

The total number of employees of esports event companies is approximately 291; the number of employees employed by esports teams is approximately 777. However, the actual number of employees, after subtracting the employees from parent companies, is approximately 177.

According to the number of employees, small and medium-sized operators make up the majority of the esports industry, with 85.7% having fewer than 50 employees. Among them, 42.9% have 16 to 50 employees, followed by 23.8% with 6 to 15 employees, and only 4.8% with more than 101 employees.



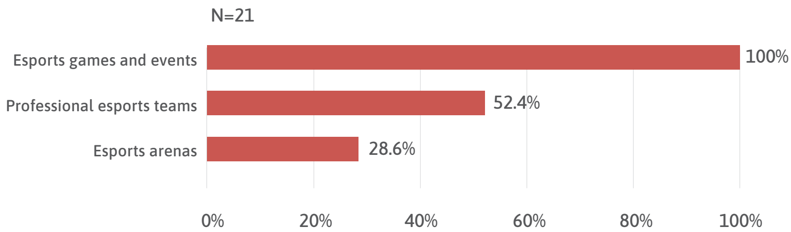

**Source:** Organized by this survey study.
**Note:**
Including four gaming industry companies, the number of employees is combined with the parent company.

***Figure 2-34.*** Number of employees in Taiwan's esports industry in 2021

# 2.2. Revenue and Business Model

## 2.2.1. Services provided by Taiwan's esports companies

In terms of the services offered by esports businesses in Taiwan in 2021, all businesses engaged in "organizing esports games and events" (100%), then "professional esports teams" (52.4%) and "esports arenas" (28.6%).



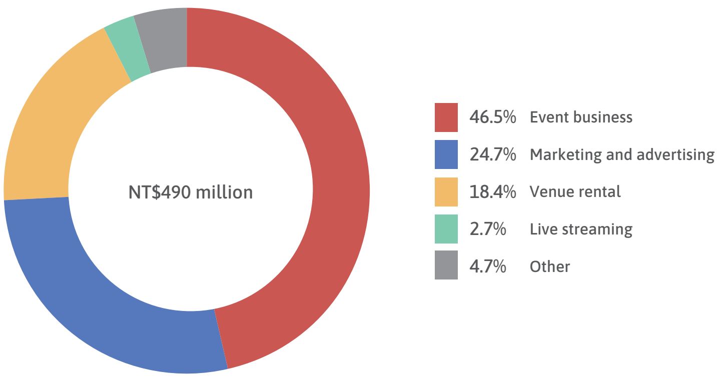

**Source:** Organized by this survey study.
**Note:** Multiple responses were allowed, so the added percentage was greater than 100.

***Figure 2-35.*** Percentage of service items provided by Taiwan's esports companies (multiple selections allowed)

### 2.2.2. Revenue structure of Taiwan's esports industry

In 2021, the esports industry in Taiwan generated approximately NT$490 million in revenue, with esports event companies generating the most revenue. at approximately NT$430 million combined, accounting for 87.8% of the total. Esports team operators generated approximately NT$60 million combined, accounting for 12.2% of the total.

The overall revenue structure of the esports industry was dominated by "event business" (46.5%). The next largest source of revenue was "marketing and advertising" (27.7%), followed by "venue rental," which accounted for 18.4% of revenue. Other revenues include game distribution/development subsidies, prize money, sponsorships, esports education, peripheral merchandise and ticket sales, and media licensing.




**Source:** Organized by this survey study.

***Figure 2-36.*** Revenue structure of Taiwan's esports industry in 2021

As for the revenue structure of each subindustry, esports event companies had the highest revenue from "event business" (48.7%), followed by "marketing and advertising" (29.1%), and "venue rental" (19.5%). For esports teams, "prize money" (53.9%) was the highest revenue contributor, followed by "live streaming" (11.5%) and "event business" (11.1%).

***Table 2-24.*** **Revenue structure of Taiwan's esports industry in 2021 by type of main business**

| Revenue sources | Esports games | Esports teams |
|---|---|---|
| Sponsorships | 0.5% | 8.7% |
| Prize money | 0.0% | 53.9% |
| Media licensing | 0.0% | 0.0% |
| Peripheral merchandise and ticket sales | 0.0% | 1.2% |
| Game distribution/development subsidies | 0.0% | 7.9% |
| Live streaming | 2.2% | 11.5% |
| Venue rentals | 19.5% | 0.0% |
| Marketing and advertising | 29.1% | 5.2% |
| Event business | 48.7% | 11.1% |
| Other | 0.0% | 0.4% |

**Source:** Organized by this survey study.

### 2.2.3. Domestic and foreign revenue structure of Taiwan's esports industry

In terms of domestic and foreign revenue, 65.0% of total revenue came from foreign revenue, while 35.0% came from domestic revenue. By industry, the esports events industry made 66.9% of its revenue overseas, while esports teams made 66.4% of their revenue domestically.

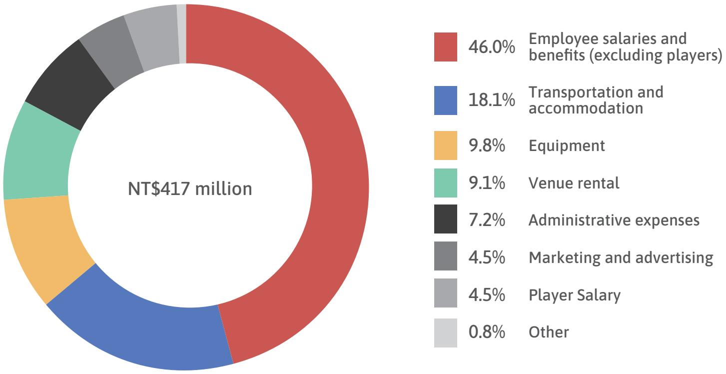
***Table 2-25.*** Domestic and foreign revenue structure of Taiwan's esports industry in 2021

| Item | Domestic ratio | Foreign ratio |
|---|---|---|
| Overall revenue | 35.0% | 65.0% |
| Esports event industry | 33.1% | 66.9% |
| Esports teams | 66.4% | 33.6% |

**Source:** Organized by this survey study.

### 2.2.4. Expenditure structure of Taiwan's esports industry

The overall spending structure of the esports industry was mainly based on "employee salaries and benefits (excluding players)," which accounted for 46%, followed by "transportation and accommodation" at 18.1% and "equipment" at 9.8%.




**Source:** Organized by this survey study.

***Figure 2-37.*** Expenditure structure of Taiwan's esports industry in 2021

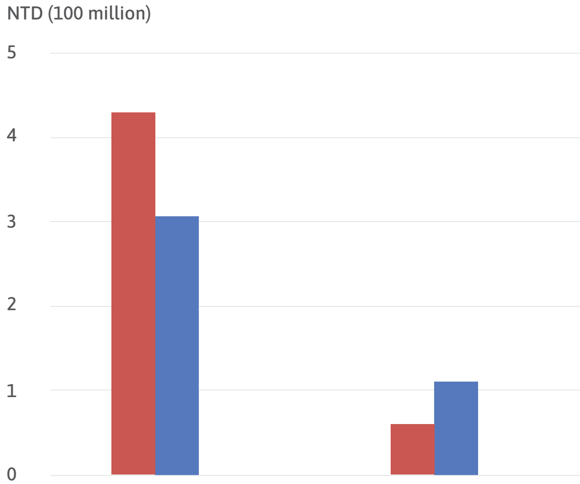
As for the expenditure structure of each subindustry, esports event companies spent the most on "employee salaries and benefits," accounting for 48.9%. This was followed by spending on "transportation and accommodation" (19.5%) and "equipment" (10.7%). Esports teams spent the most on "player salaries and benefits" (41.9%), followed by "employee salaries and benefits (excluding players)" (22.2%) and "administrative expenses" (21.6%).

***Table 2-26.*** Expenditure structure of Taiwan's esports industry in 2021 by type of main business

| Expenditure item | Esports event industry | Esports teams |
|---|---|---|
| Player salaries and benefits | 0.0% | 41.9% |
| Employee salaries and benefits (excluding players) | 48.9% | 22.2% |
| Transportation and accommodation | 19.5% | 6.3% |
| Player training | 0.0% | 2.2% |
| Venue rental | 9.9% | 3.2% |
| Equipment | 10.7% | 2.2% |
| Marketing and advertising | 5.0% | 0.4% |
| Administrative expenses | 5.5% | 21.6% |
| Other | 0.5% | 0.0% |

**Source:** Organized by this survey study.

A comparison of revenues and expenditures by esports event companies and esports teams revealed that esports event companies made more than they spent. Since some of the parent companies running esports teams are more concerned with brand exposure, marketing, or tax savings than with profit, the whole esports team industry spent more than it made.




| Type | Esports events | Esports teams |
|---|---|---|
| Revenue | 4.30 | 0.60 |
| Expenditure | 3.05 | 1.12 |

**Source:** Organized by this survey study.

***Figure 2-38.*** Revenue and expenditure of Taiwan's esports industry in 2021 by type of main business

## 2.3. Industry Observation Indexes

### 2.3.1. Viewing hours and audience size

The Free Fire World Series 2021 Singapore, held in May and featuring Garena's *Free Fire*, was the most watched gaming event in 2021, with a record-breaking 5.4 million concurrent viewers. It was also the year's most-watched event. The M3 World Championship, held in Singapore in December, was the second most popular event of the year and featured *Mobile Legends: Bang Bang*, a game developed and published by China's Moonton Games. During the event's playoff game between the Philippines' team ONIC and Indonesia's RRQ Hoshi, up to 3.19 million spectators tuned in. The majority of the spectators were Indonesian and Filipino. Garena's *League of Legends* came third. The League of Legends 2021 World Championship was originally scheduled to be held in China in November, but it was moved to Iceland due to the pandemic and had a maximum of 4.019 million viewers watching the finals between EDward Gaming (China) and DWG KIA (South Korea).

Based on how many people watched tournaments in 2021, it's clear that mobile games are now more popular than PC games in terms of tournament viewers. A wide range of games, including Garena's *Free Fire*, Moonton's *Mobile Legends: Bang Bang*, and Tencent's *PUBG M*, have all garnered high viewerships. Despite the fact that the pandemic has forced many games to be scaled back or suspended, the PC game *League of Legends* still holds one or two tournaments every January to February and has been popular for a long time.

Based on the viewership market, the Asian market is the largest group of people who currently watch esports. This is especially true in Southeast Asia, which is a market with a lot of potential that shouldn't be overlooked. In Indonesia and the Philippines, the MOBA game *Mobile Legends: Bang Bang* has a consistent audience performance, while the battle royale game *Free Fire World Series 2021 Singapore* even broke the viewership record with the largest simultaneous viewership of 5.4 million people. It is worth noting that when combining the viewership of League of Legends at different tournaments, the game is still the best-performing esport in most months. In terms of venue, the majority of the landmark events take place in Singapore, Indonesia, and Korea, with Singapore hosting two events with over 3 million spectators in 2021, demonstrating their event infrastructure maturity.

**Table 2-27.** Major global esports events and their top views in 2021



| Month | 1 | 2 | 3 |
|---|---|---|---|
| January | M2 World Championship (2.811 million viewers) | PUBG Mobile Global Championship 2020 (1.405 million viewers) | LCK 2021 Spring (803,000 viewers) |
| March | Free Fire League Latinoamerica 2021 Opening (1.461 million viewers) | MPL Indonesia Season 7 (1.186 million viewers) | Liga Brasileira de Free Fire 2021 (828,000 viewers) |
| April | MPL Indonesia Season 7 (1.476 million viewers) | LEC 2021 Spring (416,000 viewers) | LCK 2021 Spring (674,000 viewers) |
| May | Free Fire World Series 2021 Singapore (5.415 million viewers) | 2021 League of Legends Mid-Season Invitational (1.84 million viewers) | MPL Indonesia s7 (1.84 million viewers) |
| June | MLBB Southeast Asia Cup 2021 (2.284 million viewers) | LCK 2021 Summer (720,000 viewers) | WePlayAniMajor (645,000 viewers) |
| July | PUBG Mobile World Invitational (1.048 million viewers) | IEM Cologne 2021 (843,000 viewers) | Liga Brasileira de Free Fire 2021 Series A Stage 2 (599,000 viewers) |
| August | MPL Indonesia Season 8 (1.722 million viewers) | LCK 2021 Summer (1.316 million viewers) | LEC 2021 Summer (843,000 viewers) |
| September | MPL Indonesia Season 8 (1.175 million viewers) | VALORANT Masters: Berlin (811,000 viewers) | ESL Pro League S14 (759,000 viewers) |
| November | 2021 League of Legends World Championship (4.019 million viewers) | PGL Stockholm Major 2021 (2.748 million viewers) | ONE Esports MPL Invitational 2021 (1.736 million viewers) |
| December | M3 World Championship (3.19 million viewers) | VALORANT Champions 2021: Berlin – Grand finals (1.09 million viewers) | Arena of Valor International Championship 2021 (879,000 viewers) |

**Source:** Organized by this survey study.
**Note:** Multiple responses were allowed, so the added percentage was greater than 100.

With the increasing popularity of cell phones and the completion of network infrastructure in emerging markets, esports games have begun to attract large numbers of players, and regional leagues and high-intensity international competitions have begun to be held worldwide. Moonton's *Mobile Legends: Bang Bang* was the most watched game on the globe in 2021. It was watched for a total of 387 hours by millions of people in Southeast Asia. The M3 World Championship, a world tournament of the mentioned game, was held in 2021 and drew more than 3.1 million viewers. The next most popular game was *PUBG M*, which drew over 3.8 million spectators and 217 million hours of viewing time. In addition to Southeast Asia, the game provider is actively advertising the game by conducting tournaments in various areas on a regular basis and has begun to explore markets such as Brazil, Türkiye, and Eastern Europe.

***Table 2-28.*** Viewership ranking of esports games in 2021

| Rank | Game title | Total number of hours viewed | Total number of viewers |
|---|---|---|---|
| 1 | Mobile Legends: Bang Bang | 386 million | 3.1 million |
| 2 | PUBG Mobile | 216 million | 3.8 million |
| 3 | Free Fire | 142 million | 5.4 million |
| 4 | Arena of Valor | 82.1 million | 870,000 |
| 5 | Battlegrounds Mobile India | 19.3 million | 540,000 |

**Source:** EsportChart, compiled by this survey study.

### 2.3.2. Non-professional (campus) esports events in Taiwan

There were over 1,000 non-professional (campus) events in Taiwan in 2021, with a total attendance of over 20 million. This demonstrates that non-professional (campus) tournaments in Taiwan have grown in popularity. With 941 participants competing, the 2021 *League of Legends: Wild Rift Battle School League* had the highest overall attendance of 8.54 million. This was followed by the 2021 Asia Esports Championship Season 2, which drew 6.25 million spectators and 8,222 players.

***Table 2-29.*** Taiwan's non-professional (campus) esports events held in 2021

| Event title | Competi-tion events | Number of events | Number of participants | | | Total number of views | Average number of views |
|---|---|---|---|---|---|---|---|
| | | | Total | Male | Female | | |
| 2021 Season 4 LSC Summer Major | League of Legends | 75 | 443 | 440 | 3 | 2,204,320 | 24,742 |
| 2021 KartRider RUSH+ Campus League | KartRider | 147 | 365 | 358 | 7 | 706,093 | 12,608 |
| 2021 VALORANT School Championship | VALORANT | 137 | 192 | 192 | 0 | 395,064 | 21,948 |
| 2021 The Third National Esports College Cup | VALORANT, League of Legends, and NBA 2K22 | 39 | 344 | 310 | 34 | 178,357 | 8,917 |
| 2021 The first Esports National University Cup | VALORANT, Arena of Valor, and eFootball PES 2021 | 136 | 922 | 850 | 72 | 5,717 | 1,905 |
| 2021 Asia Esports Championship Season 2 | League of Legends, League of Legends ARAM, and Free Fire | 574 | 8222 | - | - | 6,250,999 | 10,890 |
| 2021 League of Legends: Wild Rift Battle School League | League of Legends: Wild Rift | 46 (days) | 941 | 939 | 2 | 8,537,064 | 185,588 |
| 2021 ACS Arena of Valor Summer Campus League | Arena of Valor | 43 | 99 | 94 | 5 | 2,030,241 | 112,791 |

**Source:** CTESA, compiled by this survey study.

# III
# FORECAST

# 01

# Digital Development Trends of Taiwan's Gaming and Esports Industries

## 1.1. Increased Marketing Costs in Taiwan due to the Impact of Chinese-Backed Funding Heading Overseas

In 2021, the Asia-Pacific region accounted for half (50%) of global revenues. It continues to be the biggest revenue-generating region in 2022. The region is expected to generate US$95.6 billion by the end of the year, accounting for 49% of global revenue, followed by North America (26%). However, the Chinese government has been heavily involved in the gaming industry since the end of 2021, stopping the issuing of game licenses. Furthermore, in order to protect minors' physical and mental health, the Chinese government has legislated to limit gaming time for teens and to require providers to establish specific in-game modes for adolescents. According to the gaming research company Newzoo report, this might cause China's game market, which was number one in the world in 2021, to be surpassed by the U.S. in 2022. The U.S. gaming market is expected to reach US$50.5 billion in sales by the end of 2022, overtaking the US$50.2 billion Chinese market to reclaim the world's number one position❶.

Respondents to this survey study also stated that, as a result of the Chinese government's restrictions, Chinese gaming funds have begun to explore prospects outside of China. The outflow of Chinese capital has an impact on the global gaming market, particularly in adjacent nations such as Japan and Korea. Several companies have already received Chinese investment or funds, but they are mostly led by Japanese and Koreans rather than being directly controlled by China. Moreover, Chinese capital is uplifting the market's marketing costs. Formerly, the marketing budget may have been NT$10-20 million, but with the arrival of Chinese capital, marketing costs will continue to rise, leaving the domestic business with insufficient funds to marketing.

❶Source: https://newzoo.com/cn/trend-reports/newzoo-global-games-market-report-2022-free-version-cn. Last viewed: 2022/12/24.

## 1.2. Mobile Games Continue to Have the Largest Market Share in terms of Gaming Device, with Role-Playing Games Generating the Most Revenue

With the rising popularity of mobile devices like cell phones and tablets, the market share of mobile games overtook that of home console games and computer games in 2016. Mobile games now make up 40% of the total revenue of the gaming industry and are the most popular type of gaming device. In 2021 and 2022, the market share remained stable (52% and 53%, respectively).

In terms of game genre preferences among different age groups, the most frequently played games by Generation Z are *Roblox, Among Us*, and *Pokémon GO*, which are mainly multiplayer interactive party games. The game genres preferred by the Millennials are *Project Makeover, Coin Master*, and *Homescapes*, which are casual games such as tile-matching or luck games. The X generation/baby boomers prefer casual games such as *Candy Crush Saga*, *Wordscapes*, and *New Words With Friends*❷.

Furthermore, Sensor Tower's data suggests that super casual games accounted for 31% of downloaded game genres in the first half of 2022, followed by arcade games (12%) and simulation games (11%). Role-playing games accounted for 27% of total revenue, followed by strategy games (21%), and puzzle games (12%)❸.

❷**Source:** https://www.data.ai/cn/go/state-of-mobile-2022/. Last viewed: 2022/12/24.
❸**Source:** https://go.sensortower.com/mobile-gaming-market-outlook-2022.html?utm_source=website&utm_medium=blog&utm_content=mobile-gaming-market-outlook-2022&utm_campaign=st-2022-09-game-ct-mobilegamingmarketoutlook. Last viewed: 2022/12/24.

## 1.3. Gaming Can Become More Immersive and Interactive If the Limitations of Virtual Technology Devices are Overcome

One of the primary reasons why people prefer virtual technology (such as AR and VR) in gaming is the immersive gaming experience. The interactive experience is deeper and gives players a chance to be fully immersed in gaming. However, as compared to other types of games, there are fewer virtual technology games. Aside from the relatively pricey VR equipment and higher system requirements, there are also limitations on the types of games that may be played. Most virtual reality games, in order to provide the finest virtual reality experience, are from the first-person perspective, such as sports, motion, action, and shooter games. There are fewer strategy and role-playing games that require more time to play. In addition to the weight of heavy equipment, wearing a VR device for an extended period of time can cause dizziness.

According to the respondents of this survey, the most challenging aspect of virtual technology is still the hardware. Before the general public can accept VR, it must overcome the limitations of hardware and game genres if it is to become more widely used or even replace cell phones.

When Apple, Google, Meta, and other large international companies saw how virtual technology could be used in gaming, they started developing devices that were more refined and light weighted. If the limitations of virtual technology devices can be fixed in the future, there will be a huge number of new games and new ways to play them. This will help games become more immersive and interactive.

## 1.4. Some Taiwanese Enterprises Capable of Leveraging Block chain and NFT Technology are Only Employing It on Souvenir NFTs due to Current Financial Regulations

Recently, with the boom of block chain technology, game players have started to roll out on-chain in-game items through new forms of trading (such as cryptocurrency and NFT). These items are traded on public online marketplaces and exchanged for physical currency. Take the well-known monster-battle blockchain game *Axie Infinity* as an example; the in-game monsters (Axie) and virtual currency (SLP) can both be exchanged as cryptocurrencies.

However, the price of playing *Axie Infinity* is high, and there are potential security issues. In March 2022, *Axie Infinity* was hacked, and about US$600 million worth of cryptocurrency was stolen[4] . Furthermore, the gameplays of games and the number of players they have may cause blockchain games to plummet. Currently, *Axie Infinity*'s digital publisher, Steam, and the Korean government have banned similar games based on cryptocurrency and NFT. These games will only be released after the relevant issues are clarified.

Moreover, respondents to this survey indicated that not all players have a positive view on the NFT mechanism, and some players think that NFT will ruin the gaming experience. Some individuals play games only for profit rather than for leisure, which will affect other players. In addition, if NFTs can be traded in the game, it may cause the original in-game trading system to become more complicated.

As a result, while the domestic gaming industry has the essential technical capabilities and has begun to create exclusive game NFTs, the majority of companies will only issue NFTs to players as souvenirs. The gaming industry will not engage in NFT trade until the direction of the relevant domestic government policy is clear.

[4] **Source:** https://forkast.news/what-is-axie-infinity-nft-gaming-3-0/. Last viewed: 2022/12/24.

## 1.5. Esports Education Continues to Thrive on Campus While Industry-Academia Collaborations Promote the Training of Esports Professionals

In the domestic esports industry, respondents pointed out that the training of professionals for the industry on campus is not just about gaming athletes. Students must take classes in game design, engineering behind the scenes, on-stage presentations, marketing strategies, and public relations. Because the courses span a wide range of fields, such as marketing, business management, business administration, electronics, and information technology, most of the campus training for the esports industry is held in cooperation with multiple departments. Professors or lecturers from various departments or fields—such as event management, live streaming systems, revenue analysis, event marketing, event broadcasting, esports practice, esports games, and team management—conduct the training. This allows students to have a clear understanding of the overall esports industry. Instead of mistaking the gaming industry for only gaming, students will be able to determine what is best for their future.

Furthermore, the school collaborates with gaming associations, the government, and related sectors. In terms of government collaborations, schools and the government participate in related esports activities. Students begin with project planning and progress through registration, promotion, event execution, and project completion. During this procedure, students will be mentored by lecturers or industry specialists to get practical experience. In terms of association collaborations, they will assist in identifying hardware and equipment suppliers to facilitate student internships. For example, associations will work with students who have skills in communication systems and electronic equipment to prepare them for careers in the industry. Students with marketing and event planning abilities can work for event companies and public relations agencies, increasing the number of young professionals in the industry.

# 02

# IP Licensing Trends of Taiwan's Gaming and Esports Industries

## 2.1. As Technology Advances in the Film Industry, the Market Recognizes the Value of Cross-Cultural Content Adaptation of IPs for Games

Since 2000, major global Hollywood films have attempted to adapt popular games into films, such as *Tomb Raider* in 2001, Max Payne in 2008, *Prince of Persia* in 2010, and *Warcraft* in 2016. However, most of the films did not achieve the desired effect and did not lead to the formation of a new wave of crazes or business opportunities for the games.

With the expansion of the gaming industry, original productions have become more complete and diverse in their storytelling, while hardware performances have continued to improve. At the same time, technology in the movie industry keeps getting better. This means that in-game images or stories can be shown to the audience in their entirety, bringing games and movies closer together. In recent years, high-quality and popular adaptations have started to appear. Including *Rampage* in 2018, *Detective Pikachu* in 2019, *Birds of Prey* in 2020, *The Witcher* original movie series on Netflix in 2020, and *Arcane* in 2021.

In addition, games feature IPs from other games to increase each other's popularity. *The League of Legends* character "Jinx," for example, was featured in the shooting game *PUBG Mobile*. With this in mind, gaming IPs are becoming increasingly marketable, and their value will rise in the future. Embracer, a prominent Swedish gaming and media conglomerate, has recently begun to acquire a huge number of potential game IPs. The organization believes that game IPs will have a major impact in the future and will provide enormous financial prospects if they are converted to other movies, series, or forms of screen content[5].

[5] **Source:** https://newzoo.com/cn/articles/newzoos-games-trends-to-watch-in-2022-metaverse-game-ip-vr-chinese-version. Last viewed: 2022/12/24.

## 2.2. Different Cultural Content IPs have Different Types of Customers and Business Models, so It is Important to First Understand how They are Different. An Important Challenge for Cross-Content IP Cooperation is the Establishment of Standardized Cooperation Models and Profit-Sharing Mechanisms

In recent years, prominent international gaming firms such as Ubisoft, Nintendo, Sony, and others have tackled the market of game IP adaptations through cross-industry collaborations, acquisitions, or the establishment of subsidiaries. Furthermore, they have invested in film and animation adaptations of their own classic IPs.

In terms of the translation of various domestic cultural IPs, respondents to this survey believe that understanding how a cultural content is created is crucial. Cultural contents are created in a variety of ways, with various target audiences and presentation methods. Translating IPs directly is difficult since there are multiple segments in an industry chain, and there are several details to discuss. These include the way texts are adapted, the orientation of the audience, the presentation of video, sound, and light effects, and so forth. The presentation of an IP by different industries may result in audience loss for existing works or failure to attract new audiences.

As a result, the translation of different cultural IPs should first address disparities in how they are developed, consumer characteristics, and business models. Knowing their distinct traits, strengths, and shortcomings might lead to conversations about how to merge intellectual property. The development of standardization in cooperation and profit-sharing in the process of business cooperation is critical to future cross-content IP collaborations. To increase the possibility of partnership across diverse cultural contents, it is vital to avoid spending too much time and effort conveying their respective points of view and positions.

## 2.3. Esports Companies Have Started to Use Different Cultural Content to Develop A Pan-entertainment Business Model

In the past, the esports sector was mostly focused on hosting esports events. It was funded by the gaming industry, which arranged various-sized gaming events around the world to increase the shelf life of games. However, with the proliferation of the Internet and globalization, the esports industry is no longer limited to the organization of esports events. Rather, it is a pan-entertainment industry that promotes products or cultural content through packaging, marketing, and promotion. According to the Newzoo report, sponsors invested around US$837 million in the industry in 2022, making it the industry's most significant source of revenue overall.

Aside from the competition, the players can be used as a brand for product promotion. Consider Faker, South Korea's most successful esports player in recent years. He is by far the most accomplished *League of Legends* esports player in the world, having won ten league championships and five international championships. Faker and his team consistently break the live broadcasting ratings record whenever they play. The successful rating result led him to better contracts as well as other commercial opportunities. For example, Faker has appeared in advertising as a bus driver or in a commercial for KLEVV memory cards alongside his colleagues.

In view of this, if esports players can successfully transition into stars, they will have the same impact as athletes, musicians, and entertainers. With a significant fan following, they can further advertise, endorse, and sell peripherals, delivering greater benefits to the esports sector. Furthermore, live broadcasters and tournament hosts can join the pan-entertainment business, increasing overall marketing capability.

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## Gaming · Esports Industries


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