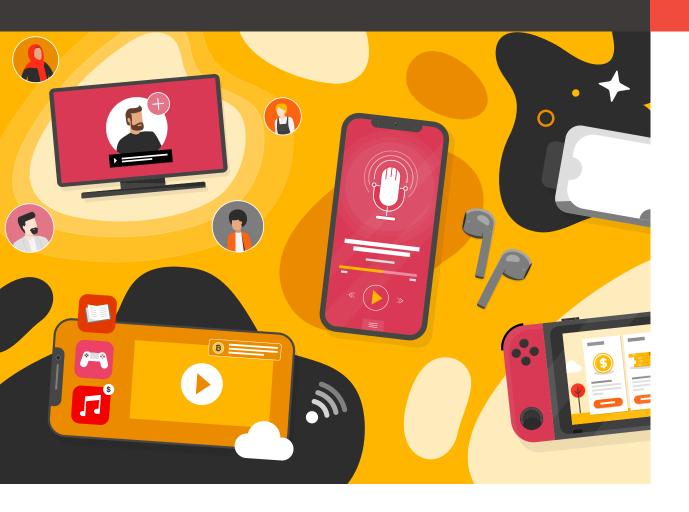
Taiwan Entertainment & Media Outlook 2021-2025

English edition

July 2021





About PwC's Outlook

PwC released its "Global Entertainment and Media Outlook 2021-2025" in July 2021.

The Outlook is a comprehensive online source of analyses with five-year historical and five-year forecast data of consumer and advertiser spending in 14 entertainment and media (E&M) industry segments across 53 territories, including Taiwan.

The segments covered include:

- Business-to-business (B2B);
- Cinema;
- Consumer books;
- Data consumption (across the Internet, by devices and content categories);
- Internet access;
- Internet advertising;
- Music, radio and podcasts;
- Newspapers and consumer magazines;
- Over-the-top (OTT) video;
- Out-of-home (OOH) advertising;
- Traditional TV and home video;
- TV advertising;
- · Video games and e-sports; and
- Virtual reality.

The data and commentary presented in the Outlook is supplied by UK research firm Omdia (formerly Ovum). The datasets for data consumption (non-revenue), podcasts, e-sports and virtual reality are presently not available for the Taiwan market due to scope limitations, with only the top 10-20 markets across the world covered for these particular industry segments.

The Outlook comes in three formats:

- An online tool at www.pwc.com/outlook requiring subscription, which allows subscribers to dig deeper into the data and analysis at a segment and territory level, as well as to compare and contrast consumer and advertising spend.
- A special report, <u>Perspectives from the Global Entertainment & Media Outlook 2021–2025</u>, providing insights into the key trends shaping the E&M industry and how companies can respond, which is freely available to non-subscribers.
- Territory editions. The Taiwan version provides a concise summary, in English and Chinese, of the key messages from the global and local E&M markets, along with detailed data and commentary for the segments covered in Taiwan.

The Taiwan edition of PwC's Global E&M Outlook is drawn from the data and analysis presented in the <u>online Outlook tool</u>. Please note this information was compiled by Omdia in the first quarter of 2021, and it does not factor in the unanticipated impact of the recent serious COVID-19 outbreak in Taiwan that led to a partial lockdown nationwide starting in May 2021.

This booklet is produced by Damian Gilhawley and Noelle Wang of PwC Taiwan's Brand & Communications department.

Introduction

The COVID-19 pandemic caused a sharp contraction in the global entertainment and media (E&M) industry in 2020, but it also helped accelerate and amplify the pre-existing consumer transition to digital across many industry segments.

The 2021 edition of PwC's Global Entertainment and Media Outlook looks at the current state of the E&M industry and provides detailed commentary and forecasts across 14 industry segments in 53 territories, including Taiwan.

PwC Taiwan has produced a local edition of the Outlook, which provides a concise summary, in English and Chinese, of the key insights from the global and Taiwan markets, which is drawn from the online resources at www.pwc.com/outlook.

Similar to global, the prospects for Taiwan's E&M industry, although challenging, remain essentially positive. Returning growth momentum after COVID will be boosted by the powerful shift to digital behaviours that's transforming the sector.

And as companies race to meet consumers where they are with an ever-expanding range of products, services and experiences, the segments within the E&M industry will grow more pervasive, more immersive and more diverse.

And all the while, the social, political, and regulatory context in which all E&M companies operate continues to evolve in unpredictable ways. All of which means that sitting still will not be the most effective posture going forward.



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Key Outlook messages - Global

The global entertainment and media (E&M) industry slowed in 2020 due to COVID-19, but it has regained its momentum this year amid accelerating changes in customer behaviour—such as the shift to streaming, gaming and user-generated content—that are rapidly transforming the industry, according to PwC's Global Entertainment & Media Outlook 2021-2025.

Global E&M revenue fell by -3.8% year-on-year to US\$2.0 trillion in 2020, when in-person entertainment plummeted. But it's on track to grow 6.5% in 2021 and 6.7% in 2022 as lockdown restrictions gradually ease and COVID effects wane, fuelled by strong demand for digital content and advertising. Even so, it will take several years for the damage of the pandemic to be undone, with total global E&M revenue forecast to increase at a 5% CAGR from 2020 to 2025 to reach US\$2.6 trillion.

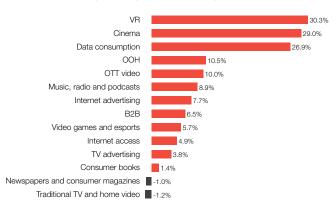
Global E&M revenue forecast for next five years...

2020-2025 CAGR: 5.0% — 8 2.5 2.0 1.5 1.0 0.5 0.0 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 -4 Global E&M revenues (US\$tn) — E&M year-on-year growth (%)

Note: 2020 is the latest available data; 2021-2025 values are forecasts.

Source: PwC's Global Entertainment & Media Outlook 2021-2025. Omdia

and projected global growth by segment



Looking at the outlook for individual industry segments, there are a number of bright spots to be found. The common driving force is changes in customer behaviour—propelled by deep-seated megatrends, newly acquired habits, and the forcing function of the pandemic—overlaid by continuing advances in technology, and in the delivery and distribution of content.

- Virtual reality (VR) is the fastest-growing segment, albeit from a small base. Its revenues surged by 31.7% in 2020 to US\$1.8bn and are projected to sustain a CAGR of 30+% over the next five years to reach US\$6.9bn by 2025.
- Cinema box office revenues contracted by 71% year-on-year in 2020, and will rebound by 93.3% in 2021 as lockdowns ease. The segment will grow by a CAGR of 29.0% to 2025 but is unlikely to recover to pre-pandemic levels until 2024.
- OTT video streaming boomed in 2020, boosted by COVID lockdowns, and its growth trajectory will continue. Streaming video-on-demand (SVOD) is projected to grow at a CAGR of 10.6% to 2025, making it an US\$81.3bn industry.
- Music is poised for robust growth following a 74.4% slump in live music revenues in 2020. Total music revenues are set to grow at a 12.8% CAGR over the next five years, fuelled by digital streaming, along with a return to live performances.
- Spending on Internet advertising rose by 9% year-on-year to US\$336bn in 2020, overtaking non-Internet advertising spending for the first time, and is projected to record strong growth of a CAGR of 7.7% over the next five years.
- The business-to-business (B2B) segment will see a high CAGR of 6.5% from 2020-25, supported by the recovery in trade shows. However, this sub-segment will take the longest to recover, surpassing pre-pandemic levels in 2025.
- Video game and esports revenues continue their rapid ascent, reaching a total of US\$147.7bn in 2020, with a 5.7% CAGR projected to expand the segment to become an almost US\$200bn business (US\$194.4bn) by 2025.
- Internet access accounted for 34% of E&M spending in 2020 and will increase at a 4.9% CAGR to 2025. Mobile internet access will drive growth, underpinned by 5G, advances in handset technology and premium content bundles.
- By contrast, newspaper and magazines and traditional TV and home video are the only segments to show negative CAGR. This is not new for these traditional forms of media, but the pandemic has significantly lowered the level.

In many instances, however, the projected growth—and hence the rewards—will be asymmetrical. Just as the economic and health recoveries from COVID-19 will not be equally distributed around the globe, there will be a significant unevenness in the prospects for individual E&M industry segments and for companies that focus on particular geographic markets.

Power shifts: Altering the dynamics of the E&M industry

Although the COVID pandemic slowed the E&M industry last year, it also accelerated and amplified power shifts that were already transforming the industry. Whether it's box office revenues shifting to streaming platforms, content moving to mobile devices, or the increasingly complex relationships among content creators, producers and distributors, the dynamics and power within the vast, interconnected industry continue to shift. PwC has identified seven types of power shifts, as follows:

Macro shifts: Powered by disruption

The most obvious—and most global—of the drivers of change in E&M is the migration to digital consumption, which helped offset sharp revenue losses across the global E&M industry in 2020. Habits accrued over restricted periods during COVID will remain embedded. Many of the shifts already in play—the move towards digital products and online sales, the relentless rise of streaming, the growing influence of gaming and user-generated content—gained momentum and will barrel forward.

Sector shifts: Access booms, ads hold firm, consumer spending recovers

The rapid move to digital content services during the pandemic was part of a wider migration. People streamed shows, read e-books, worked from home, exercised at home, etc. The shift towards online consumption spurred significant growth in connectivity and demand for data, while marketers rushed to meet consumers where they spend more of their time. As more goods and services are sold online, the access, advertising and consumer spending sectors will see further growth.

Generational shifts: Creators and youth will be served

Many younger consumers have little awareness of, or interest in, traditional media. On the other hand, media platforms designed for young consumers or that enable lightly-produced, authentic content have boomed. Gaming is central to the youth movement and is becoming a significant driver of data consumption — in fact it is on pace to be the fastest-growing content category in that regard, accounting for 6.1% of total data consumption globally by 2025, up from 4.7% in 2020.

Business model shifts: The streaming wars

Changes in consumer behaviour have driven powerful shifts in E&M business models. Foremost among these shifts is the way the streaming boom of 2020 has set the industry on a new growth trajectory. SVOD revenues will grow at a CAGR of 10.6% through to 2025, by which point SVOD will be a US\$81.3bn industry. But there is likely a limit to the number of streaming subscriptions that a household is willing to buy—and people can cancel their OTT services with relative ease.

Location shift: Meeting consumers where they are

Service providers are now focusing on how to meet consumers where they are and at their convenience, with digital formats leading the way. Audio content providers are diversifying their offerings to become more of a marketplace where customers can linger and browse for various topics of their choice like comedy, politics and so on. And if companies want to find younger consumers where they are spending their time, that means focusing on gaming for mindshare and market share.

Portfolio shifts: Return of the megadeal

In an increasingly virtual world, E&M companies continue to regard deals as a valuable way to reshape their businesses and maintain or gain market leadership. Companies are using transactions to tap into new audiences with new habits, and access the depth of content needed to meet consumers where they are. In 2020, even as much of the world shut down, the capital markets were remarkably busy, and the prospects for E&M M&A activity in 2021 and beyond are bright.

Regulatory shifts: The pushback on platforms

The regulatory scrutiny of Big Tech is yet another shift impacting the E&M industry. Pressure to create a more level playing field on which local and offline-oriented businesses can compete with the giants has intensified. Anti-trust pressures have increased with calls to break up big tech platforms along with government proposals for new media regulations. Changes to regulatory regimes are inevitable and it's vital that E&M players incorporate regulatory risks into their planning processes.

Overall, as we look ahead to 2022, the outlook for the global E&M industry, although challenging, remains essentially positive. The powerful shift to digital behaviours will provide a strong boost to global growth in the industry for the next several years. And as companies race to meet consumers where they are with an ever-expanding range of products, services and experiences, the E&M industry segments will grow more pervasive, more immersive and more diverse.

Even in the areas that offer the most compelling topline growth—such as video streaming—the nature of competition is likely to change dramatically over the coming years. And all the while, the social, political, and regulatory context in which all E&M companies operate continues to evolve in unpredictable ways. All of which means that sitting still, relying on the strategies that created value and locked up market share in the past, will not be the most effective posture going forward.

Key Outlook messages - Taiwan

Taiwan's entertainment and media (E&M) market was worth US\$15.5bn by revenue in 2020, down -1.7% on the previous year due to COVID-19—though slightly better than the global headline fall of -3.8%. Even though Taiwan successfully contained the domestic spread of COVID-19 during 2020, live physical events were hit particularly hard by the pandemic.

For instance, cinema box office revenue fell by 49.2% on a year-on-year basis in 2020, live music revenue by 56.0% and trade show revenue by 61.9%. On the other hand, a few digital E&M sectors benefitted from COVID-19 and its fallout, with OTT video revenue expanding by 16.2% year-on-year in 2020, followed by a 10.3% rise in video games revenue.

The projected outlook for the Taiwan market in 2021 sees entertainment and media revenue rising 5.0% year-on-year off a low base to US\$16.3bn. However, this forecast was made before the first serious COVID-19 outbreak in Taiwan in May 2021 and the subsequent lockdown restrictions. This unexpected event has heavily affected Taiwan's service industry, including the E&M sector, and its disruptive economic impact may end up being more pronounced this year than in 2020.

Looking ahead to the next five years, the aftershocks of COVID-19 will continue to weigh on growth prospects, with total E&M market revenue in Taiwan forecast to rise by a modest 3.2% CAGR to US\$18.2bn in 2025. The post-COVID recovery will be supported by ongoing government efforts to promote and develop the domestic cultural and creative industry.

The strongest growth performers in the 2021-2025 period, in terms of consumer and advertising spend, will be the cinema (21.8% CAGR), OTT video (11.4%), music and radio (10.2%), out-of-home advertising (8.0%) and Internet advertising (5.5%) segments. The weakest areas will be traditional TV and home video (-5.3% CAGR), consumer books (0.5% CAGR) and newspapers and consumer magazines (1.0%), as traditional forms of media continue to struggle in the digital age.

The detailed data and commentary for each of the E&M segments covered for Taiwan is provided in the following pages.

Entertainment and Media market in Taiwan (US\$ millions)

Industry segment	2016	2017	2018	2019	2020E	2021F	2022F	2023F	2024F	2025F	2020-25 CAGR
Business-to-business	430	436	441	446	377	414	443	457	467	474	4.7%
Cinema	293	314	321	303	154	163	345	382	397	412	21.8%
Consumer books	529	534	528	520	525	528	532	535	537	537	0.5%
Internet access	6,084	6,289	5,983	5,763	5,829	5,987	6,206	6,411	6,599	6,775	3.1%
Internet advertising	945	1,165	1,367	1,454	1,544	1,691	1,792	1,882	1,965	2,021	5.5%
Music and radio	279	279	291	306	250	294	344	369	389	406	10.2%
Newspapers and consumer magazines	939	916	884	846	715	765	761	758	753	752	1.0%
OTT video	239	408	513	616	716	813	920	1,029	1,124	1,228	11.4%
Out-of-home advertising	163	154	169	178	152	177	202	216	219	224	8.0%
Traditional TV and home video	2,610	2,558	2,531	2,402	2,205	2,183	2,088	1,962	1,846	1,684	-5.3%
TV advertising	976	964	950	937	831	885	902	900	914	901	1.6%
Video games	1,663	1,800	1,892	2,171	2,394	2,582	2,701	2,809	2,914	3,013	4.7%
Total revenue	15,150	15,817	15,870	15,942	15,692	16,482	17,236	17,710	18,124	18,427	
Total without double counting	15,063	15,717	15,758	15,813	15,549	16,331	17,071	17,532	17,933	18,226	3.2%

Note: Numbers shown are rounded. Totals may not equal the sum of their parts due to rounding.

Business-to-business

Taiwan's business to-business (B2B) market is relatively mature and one of the lowest-growth performers in Asia Pacific. Even though Taiwan successfully contained the spread of COVID-19 during 2020, total B2B revenue fell by -15.5% year-on-year to US\$377mn, with trade shows revenue hit particularly hard, plummeting by -61.9% over 2019. Most of the large trade shows scheduled for 2020, including Computex Taipei, were postponed or cancelled on account of the pandemic.

Taiwan's exhibition sector has been further affected by the serious COVID-19 outbreak that spread domestically in May 2021 and the subsequent lockdown restrictions. The government has earmarked a total of NT\$200mn (US\$7.9mn) in funds for the domestic MICE (meetings, incentives, conferences and exhibitions) industry to help cushion the economic impact.

The projections for 2021 and beyond were made before the latest COVID-19 wave hit, and these show B2B revenue rising by 9.8% in 2021 on a low-base effect, and increasing at a 4.7% CAGR to reach US\$474mn by 2025. The highest growth will be seen in the trade show sector as it rebounds after COVID-19, at a 24.3% CAGR to 2025, accounting for some 65% of the overall increase in total B2B market revenue over the forecast period. The other B2B sectors—including business information, professional books and trade magazines—will each record low-to-modest growth over the 2021-2025 period.

Business-to-business in Taiwan

Unit: US\$ millions	2016	2017	2018	2019	2020E	2021F	2022F	2023F	2024F	2025F	2020-25 CAGR
Business information	189	193	196	200	195	203	211	215	218	221	2.5%
Professional books	137	138	139	139	129	133	135	135	134	134	0.7%
Electronic	43	48	52	56	57	57	65	68	71	74	5.5%
Print/audio	95	91	87	83	72	76	70	66	63	59	-3.8%
Trade magazines	26	25	24	24	21	23	24	25	25	25	3.7%
Advertising sub-total	13	12	12	12	10	11	12	12	13	13	4.5%
- Digital	4	4	5	5	6	6	7	8	8	9	9.2%
- Print	10	8	7	6	4	5	5	4	4	4	-3.0%
Circulation sub-total	12	12	12	12	11	12	12	12	12	12	2.8%
- Digital	1	1	1	1	1	1	2	2	2	2	7.5%
- Print	12	11	11	11	9	10	11	11	11	11	2.1%
Trade shows	77	80	82	84	32	55	71	82	90	95	24.3%
Total revenue	430	436	441	446	377	414	443	457	467	474	4.7%

Cinema

Taiwan was one of the few places that kept COVID-19 largely at bay in 2020, and so its cinema industry fared better than most last year, though ticket sales still fell by nearly half on a year-on-year basis to US\$154mn. The serious COVID-19 outbreak that led to a partial lockdown in Taiwan starting from May 2021, which included the temporary closure of all cinemas for the first time during the pandemic, will further impact cinema attendance this year. Once the COVID-19 crisis dissipates, local box-office revenue is seen recovering at a 21.8% CAGR through to 2025, when it will total US\$412mn.

Cinemas in Taiwan were badly hit when the pandemic first hit early in 2020, but things improved after the government gradually lifted mass gathering restrictions around June last year. Cinema attendance also benefitted from two million vouchers worth US\$22 each that were given away in the summer by the Ministry of Culture to boost arts consumption.

With the Hollywood studios postponing nearly all of their 2020 release schedule, or sending titles straight to streaming platforms, Taiwan's cinemas filled the void with Asian and local titles. Japanese animation film *Demon Slayer* was the highest grossing film in Taiwan in 2020, with box office revenue of US\$21mn, followed by the South Korean thriller *Train to Busan: Peninsula*. Rounding out the top-five films were the US tentpole movies *Tenet* and *Wonder Woman 1984*, and the Taiwanese drama *Little Big Women*, which was the most successful local film with US\$6.6mn in ticket sales in 2020.

Prior to the pandemic, home-grown films accounted for around 7% of Taiwan's box office, but their share jumped to 17% in 2020 as local film-makers took the opportunity to step up their game. In July 2020, cinema owners and production teams, in partnership with the Ministry of Culture, announced an initiative called Local Films Taking Off, under which four to five Taiwanese films would hit the big screens every month though to April 2021. As a result, many local films from diverse genres premiered in the second half of 2020, many of them becoming hits and heralding a local cinema renaissance.

In response to the COVID-19 surge in mid-2021, the Ministry of Culture has earmarked NT\$4.5bn (US\$162.7mn) for the domestic arts and cultural Industry, including cinema operators and production companies, to help cushion the impact.

Cinema in Taiwan

Unit: US\$ millions	2016	2017	2018	2019	2020E	2021F	2022F	2023F	2024F	2025F	2020-25 CAGR
Box office	293	314	321	303	154	163	345	382	397	412	21.8%
Total revenue	293	314	321	303	154	163	345	382	397	412	21.8%



Consumer books

Book publishing in Taiwan saw a small uptick in growth in 2020, with total consumer books revenue up 1.0% year-on-year to US\$525mn in 2020, and is set to grow at a 0.5% CAGR over the five-year forecast period to US\$537mn in 2025.

Due to changes in reading habits over time and the shifting supply-demand situation in the local book publishing market, print revenue is forecast to decline from US\$430mn in 2020 to US\$388mn in 2025 at a -2.1% CAGR. This will partly be offset by a concurrent rise of 9.6% CAGR in e-book revenue from US\$94mn to US\$149mn over the forecast period.

In 2020, the number of new books, including e-books, published in Taiwan fell by -4.8% yoy to 35,041, marking the lowest level in 20 years, according to the National Central Library's latest annual report on local publication trends. The overall decrease in the number of published books reflected a shift in reading preferences among Taiwanese people, from print books to e-books, as well as the effects of COVID-19 as local publishers were conservative in releasing new titles.

As for the e-book sector, a total of 2,038 new e-books were released in 2020, accounting for 5.8% of all books published in Taiwan during the year, and an increase from 1,591 (4.3%) in 2019. Additionally, the number of e-books borrowed from public libraries in Taiwan continued the growth seen in recent years, surging by 42.3% year-on-year to 3.6 million in 2020.

The government has rolled out several measures to improve the environment for Taiwan's publishing industry and create more business opportunities. These included the launch of a consumer voucher programme in July 2020 to boost spending in the arts and culture sectors amid the COVID-19 pandemic. The issuance of the "Arts FUN Go" vouchers, each valued at NT\$600 (US\$22) and valid until the end of 2020, boosted local arts consumption by nearly NT\$1.2bn (US\$43mn) as of the end of December 2020, of which over NT\$670mn, or 56%, was spent in bookstores, according to government statistics.

Furthermore, the government has introduced a VAT exemption on the sale of print and digital books published or imported by publishing houses, with effect from 1 March 2021, and also launched a public lending rights programme on a three-year trial basis, which seeks to compensate authors and publishers for their books being made free for public use in libraries.

Although brick-and-mortar bookstores were not ordered to temporarily close following the first serious COVID-19 outbreak in Taiwan in May 2021, the consumer book sector, particularly independent bookstores, has been hit hard by the pandemic. It has been included in the government's NT\$4.5bn (US\$162.7mn) stimulus relief plan for the arts and cultural industry.

Consumer books in Taiwan

Unit: US\$ millions	2016	2017	2018	2019	2020E	2021F	2022F	2023F	2024F	2025F	2020-25 CAGR
Electronic	42	57	70	82	94	106	118	129	140	149	9.6%
Print/audio	487	477	459	438	430	422	414	406	397	388	-2.1%
Total revenue	529	534	528	520	525	528	532	535	537	537	0.5%

Internet access

Taiwan has a highly developed telecoms infrastructure and a very competitive mobile market with five main operators. It is also one of the most well-connected economies in the Asia Pacific region, with high Internet user penetration and adoption of smartphones, and a strong appetite for high-speed mobile broadband services, as well as OTT services and apps.

Total Internet access revenue will grow at a CAGR of 3.1% from US\$5.8bn in 2020 to US\$6.8bn in 2025, with mobile (4.4% CAGR) outpacing fixed line (0.5% CAGR) over the forecast period. Taiwan has an advanced fixed broadband sector, but it is stagnating as more users move to mobile. High mobile phone penetration has resulted in intense competition for new subscribers among local network operators, as consumers increase their data use and spend on new services and devices.

Taiwan's mobile market is currently mostly comprised of 4G subscriptions, but 5G is starting to become widely available. The government allocated 5G spectrum and licenses in early 2020, and local telecom operators started to provide mobile 5G services to consumers from July 2020 onward. Subscription uptake has been faster than the operators expected, with the total number of 5G subscribers in Taiwan surpassing the one million mark in just under six months by December 2020.

Taiwan's National Communications Commission, which regulates telecommunications and broadcasting services, expects the 5G service coverage rate in Taiwan to reach 80% by 2024, up from about 26% as of the end of 2020. The government plans to allocate NT\$26.7bn (US\$950mn) in subsidies to local 5G operators from 2021 through to 2025 in order to help reinforce the telecoms infrastructure in both urban and rural areas and to accelerate the development of 5G applications.

Internet access in Taiwan

Unit: US\$ millions	2016	2017	2018	2019	2020E	2021F	2022F	2023F	2024F	2025F	2020-25 CAGR
Fixed broadband access	2,069	2,086	2,079	2,087	2,074	2,079	2,088	2,099	2,110	2,125	0.5%
Mobile Internet access	4,015	4,203	3,904	3,676	3,755	3,908	4,118	4,313	4,489	4,651	4.4%
Total revenue	6,084	6,289	5,983	5,763	5,829	5,987	6,206	6,411	6,599	6,775	3.1%



Internet advertising

The Internet advertising market in Taiwan has historically experienced strong growth, supported by high broadband and smartphone penetration. Total revenue increased by 6.2% year-on-year to US\$1.5bn in 2020 despite COVID-19. Looking ahead, growth will be moderate over the forecast period as the market matures, at a 5.5% CAGR to US\$2.0bn by 2025.

Mobile ad spend will continue to be the main growth driver in the Taiwan market, and is projected to increase at a 7.8% CAGR to US\$1.2bn (equivalent to a market revenue share of 61.7%) by 2025. This is a much faster growth rate than for wired ad revenue, which will increase at a 2.5% CAGR over the next five years. All sub-segments of mobile ad revenue will grow over the five-year forecast period, but the fastest-growing sub-segment will be video display, at a 20.5% CAGR.

The Taiwan government continues to actively support the mobile medium by improving the national internet infrastructure, as part of its Forward-looking Infrastructure Development Programme, and promoting wider adoption of mobile payments (targeting a penetration rate of 90% by 2025, up from the current rate of 67.5% in 2020). Other key factors underpinning future growth in the Internet advertising market include a booming e-commerce sector and expanding 5G deployments.

Internet advertising in Taiwan

Unit: US\$ millions	2016	2017	2018	2019	2020E	2021F	2022F	2023F	2024F	2025F	2020-25 CAGR
Mobile Internet advertising	445	579	686	750	858	962	1,048	1,127	1,198	1,246	7.8%
Display sub-total	242	326	384	411	483	557	620	674	719	751	9.2%
- Other display	207	274	321	337	378	415	445	466	479	484	5.1%
- Video	35	52	63	74	105	143	175	208	240	267	20.5%
Paid search	203	253	302	339	375	405	428	454	479	496	5.7%
Wired Internet advertising	500	586	681	704	686	729	744	755	766	775	2.5%
Classified	164	187	208	213	189	210	214	218	222	226	3.6%
Display sub-total	172	188	219	227	223	236	239	240	242	243	1.7%
- Other display	64	69	77	79	83	85	86	85	85	85	0.3%
- Video	108	119	142	149	140	151	154	155	157	158	2.5%
Paid search	164	211	254	264	274	283	291	297	302	306	2.2%
Total revenue	945	1,165	1,367	1,454	1,544	1,691	1,792	1,882	1,965	2,021	5.5%

Music, radio and podcasts

Taiwan's music and radio market contracted by -18.3% to US\$250mn in 2020 due to the negative effects of COVID-19, particularly on the live music sector. Taiwan was comparatively successful in managing the pandemic last year, but it experienced a sudden surge in community transmission in May 2021 that led to a semi-lockdown and restrictions on public events and gatherings. The government has put forward NT\$4.5bn (US\$162.7mn) stimulus relief package for the domestic arts and cultural industry, including concert halls and music venues, in order to help cushion the economic impact.

Assuming the latest COVID-19 outbreak in 2021 can be quickly contained, music and radio revenue is seen growing at a 10.2% CAGR over the next five years to US\$406mn in 2025, primarily driven by digital music streaming and live music.

Music

Taiwanese music fans have long since made the transition to digital products, which accounted for 83.7% of all recorded music revenue in 2020. They have a range of subscription-based music streaming brands to choose from, including big international players like Apple Music, Line Music, Spotify and local music streamer KKBOX. The digital recorded music sector will continue to grow apace, rising from US\$118mn in 2020 to US\$187mn in 2025, at a 9.7% CAGR.

Live music revenue fell by -56.0% to US\$37mn in 2020 due to the cancellation or postponement of many music shows and festivals as COVID took hold early in the year. After the Taiwan government lifted mass gathering restrictions in June 2020, the live music scene began to slowly but steadily return to normalcy. Taiwan subsequently enjoyed many full-capacity festivals, concerts and events, but the return of COVID-19 restrictions since May 2021 has hit the live music sector.

Before that, the focus had largely been on local talent, as strict quarantine measures for entering Taiwan have affected international acts. Once the global live music business returns, Taiwan is expected to take its place in the Asian touring market, with live music revenue seen increasing at a 27.4% CAGR over the forecast period to reach US\$125mn in 2025.

Radio

Taiwan's radio market is saturated in terms of listeners and the number of radio stations (185 at the end of 2020). The proportion of those who listen to the radio rose from 28.8% in 2019 to 35.7% in 2020, according to the National Communication Commission's latest *Communications Market Report*. Even so, radio advertising revenue fell -17.2% to US\$72mn in 2020, impacted by COVID-19, and is only expected to grow at a 2.7% CAGR to US\$82mn in 2025.

Podcasts

Podcasts are growing in popularity in Taiwan, with local content producers flocking to the sector since 2019. A market survey conducted in May 2021 by iSurvey and CommonWealth Magazine found that the percentage of respondents listening to podcasts had risen markedly during the COVID-19 pandemic, from 6.6% in August 2020 to 20% in May 2021.

Local podcast start-up SoundOn, founded in 2019, has since grown into one of Taiwan's largest podcast hosting platforms. The number of podcasts it produces for the local market has grown from 50 to more than 10,000 since its launch, and the company says it aims to become the top advertising platform for podcasters, helping the latter to monetise their content.

Music and radio in Taiwan

Unit: US\$ millions	2016	2017	2018	2019	2020E	2021F	2022F	2023F	2024F	2025F	2020-25 CAGR
Live music	61	68	76	84	37	60	97	110	118	125	27.4%
Live music sponsorship	13	13	14	15	4	9	15	16	17	18	34.8%
Live music ticket sales	49	55	62	69	33	51	82	94	101	107	26.4%
Recorded music	124	120	126	135	141	152	163	175	187	199	7.2%
Digital recorded music	73	82	93	106	118	131	146	160	174	187	9.7%
- Digital music downloading	3	2	2	1	1	0	0	0	0	0	-44.1%
- Digital music streaming sub-total	62	70	82	97	110	125	140	156	171	184	10.9%
- Digital music streaming advertising	7	8	10	13	14	16	18	20	21	23	10.6%
- Digital music streaming consumer	55	62	73	84	96	109	122	136	149	161	10.9%
- Ringtones and ringbacks	9	9	9	8	7	6	5	4	3	3	-17.7%
Music performance rights	3	4	4	4	3	3	3	3	4	4	3.4%
Music synchronisation	1	1	1	2	1	1	1	2	2	2	1.9%
Physical recorded music	47	34	29	24	19	16	13	11	8	7	-18.9%
Radio advertising	93	91	89	87	72	83	84	84	83	82	2.7%
Total revenue	279	279	291	306	250	294	344	369	389	406	10.2%

Note: Podcast data is not available for the Taiwan market.

Newspaper and consumer magazines

Newspapers

Taiwanese newspaper publishers saw a year-on-year decline of -16.9% in total newspaper market revenue to US\$527mn in 2020, hit by a combination punch of the impact of COVID-19 on advertising, digital disruption and operational downsizing.

Taiwan's last evening newspaper, the *United Evening News*, closed in June 2020, and the once best-selling *Apple Daily* tabloid newspaper ended its print edition in May 2021 after 18 years of publication. Apple Daily cited a shift in readers' reading behaviours and continued operating losses, and said it would focus instead on its online news operations.

Traditional media sources like TV and print are becoming less important for news consumption while digital platforms and social media have become more widely used, mainly through smartphones. Aggregators play an important part in online news consumption in Taiwan, and the most used digital news source is Yahoo! News (39% weekly use), according to Reuters Institute's *Digital News Report 2021*. More than two-thirds of the Taiwanese population use social media (including Line, Facebook and YouTube) for all purposes and most of them also use these digital platforms for accessing news.

The data forecasts for 2021 and beyond were made before the recent COVID-19 surge in Taiwan, and these show total newspaper market revenue increasing (off a low base) by 6.6% this year, and at a 0.9% CAGR over the next five years to US\$553mn by 2025. Digital's share of the newspaper market is projected to rise from 19.0% in 2020 to 30.0% in 2025.

Consumer magazines

Taiwan's consumer magazine sector was similarly impacted in 2020, with total revenue falling by -11.8% year-on-year to US\$187mn. Downsizing was also a factor, with the tabloid weekly *Next Magazine* ceasing online publication in February 2020, less than two years after closing its print edition. And in February 2021, *The Journalist*, a 34-year-old weekly political magazine, ended print publication due to declining readership, though it will continue to publish content online.

Total consumer magazine revenue is forecast (made before the COVID-19 spike and semi-lockdown in May 2021) to increase by 8.0% in 2021 on a low-base effect, and at a 1.3% CAGR over the forecast period to US\$200mn by 2025.

Newspapers and consumer magazines in Taiwan

Unit: US\$ millions	2016	2017	2018	2019	2020E	2021F	2022F	2023F	2024F	2025F	2020-25 CAGR
Newspapers	706	692	665	634	527	562	559	558	554	553	0.9%
Advertising	343	325	297	265	181	199	192	183	176	170	-1.3%
- Digital	30	32	34	35	38	39	40	42	43	45	3.5%
- Print	313	293	263	230	143	161	152	141	132	125	-2.7%
Circulation	363	366	368	369	347	363	367	375	378	383	2.0%
- Digital	21	30	38	48	62	73	86	98	110	121	14.3%
- Print	342	337	330	321	285	290	282	277	268	262	-1.7%
Consumer magazines	233	224	220	212	187	202	202	200	199	200	1.3%
Advertising	79	70	67	62	58	59	61	62	62	63	1.8%
- Digital	15	17	20	22	25	26	29	31	34	36	7.8%
- Print	64	53	47	40	33	33	32	30	29	28	-3.8%
Circulation	154	154	153	150	129	143	141	139	137	136	1.1%
- Digital	9	11	13	15	17	18	20	22	24	25	8.2%
- Print	146	143	140	135	112	125	121	117	113	111	-0.2%
Total revenue	939	916	884	846	715	765	761	758	753	752	1.0%

OTT video

Over-the-top (OTT) video streaming services are growing rapidly in Taiwan, with total OTT video market revenue having accelerated at a 31.6% CAGR in the 2016-2020 period. Further healthy growth is seen over the next five years, helped in part by an online streaming boost during the COVID-19 pandemic, with revenue increasing at a 11.4% CAGR from US\$716mn in 2020 to US\$1.2bn in 2025, of which subscription video on demand (SVOD) will account for the bulk at 98%.

A Taiwan OTT market survey conducted in October 2020 by AMPD Research and its Taiwan partner Engagement Lab found that, among the Internet population over 15 years old in Taiwan, 95% use advertising-based video on demand (AVOD) services, led by YouTube, and 41% use SVOD services, with each household paying an average of NT\$375 (US\$13) per month for OTT video streaming. Currently there are around 2.2 million paid SVOD accounts in Taiwan.

Taiwan's video streaming market is punctuated by bundling deals and revenue-sharing agreements between OTT service providers and local telcos and cable operators, as well as hybrid business models. Taiwanese multimedia company CatchPlay has successfully launched its own SVOD service, opting for close partnerships with existing providers.

Recent key developments in the Taiwan OTT market include a ban on Chinese OTT service providers. OTT broadcasting is not open to Chinese investment, yet Chinese companies had adopted indirect routes to enter the Taiwan market through local agents. In September 2020, the government formally banned Chinese OTT platforms like iQiyi and Tencent's WeTV from operating in Taiwan, following the revision of rules that bar their local partners from providing services for them.

The National Communications Commission (NCC) is in charge of enacting the executive order banning Chinese OTT service providers. At the same time, it has put forward a wider bill that aims to regulate OTT services in Taiwan, which is undergoing legislative review. Published in July 2020, the Internet Audiovisual Service Management Act would, among other items, require OTT operators to register with the NCC and regularly report business information to the agency.

In anticipation of the new law, the New Media Entertainment Association (NMEA) introduced in October 2020 a "Taiwan VOD Self-Regulation Code" to contribute to the healthy development of the OTT market. NMEA is Taiwan's largest audiovisual industry body, with over 150 members including domestic and foreign OTT, TV, film and production companies.

OTT video in Taiwan

Unit: US\$ millions	2016	2017	2018	2019	2020E	2021F	2022F	2023F	2024F	2025F	2020-25 CAGR
Subscription video on demand	228	396	501	603	701	797	902	1,010	1,104	1,207	11.5%
Transactional video on demand	11	12	13	14	15	16	17	19	20	21	7.0%
Total revenue	239	408	513	616	716	813	920	1,029	1,124	1,228	11.4%

Out-of-home advertising

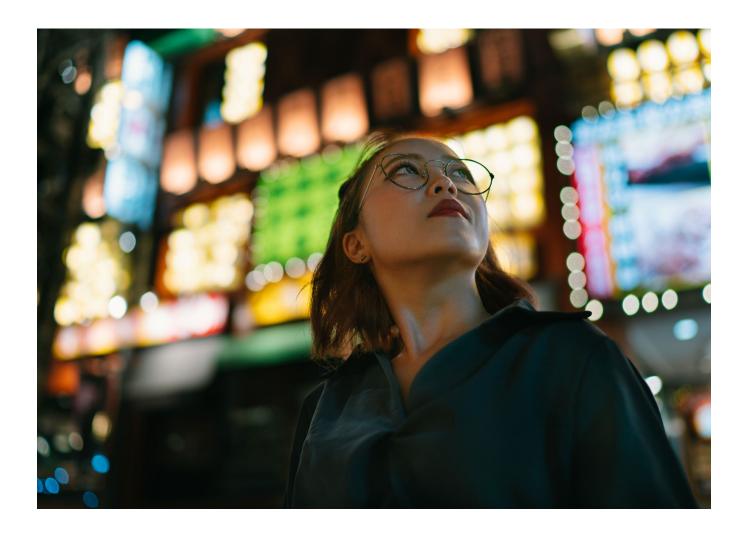
Taiwan's out-of-home (OOH) advertising market was the best performer in the world in 2020, with revenue falling by only -14.6% year-on-year to US\$152mn in the face of COVID-19, compared with average annual declines of -27.0% and -21.5% at the global and Asia-Pacific levels, respectively. Its outperformance was helped by Taiwan's effective handling of the health crisis in 2020, with ad spending picking up in the second half of the year thanks to recovering domestic consumption.

Also, the nature of Taiwan's OOH market helped to cushion some of the economic fallout from COVID-19 in 2020, with 69.7% of total OOH revenue in Taiwan coming from digital, making it the most advanced market not only in Asia Pacific but also worldwide. Digital advertising displays are ubiquitous in Taiwan's cities as well as at public transport hubs and airports. This format has defensive qualities compared with static billboards and signs, the market for which had seen weakened demand long before the pandemic. As a result, Taiwan is well placed to withstand reduced OOH ad spend amid COVID-19.

Digital will further increase its share of Taiwan's OOH market to 80.8% by 2025—supported by new project developments like the Taipei Twin Towers—and drive growth at a 8.0% CAGR to reach total OOH revenue of US\$224mn in 2025.

Out-of-home advertising in Taiwan

Unit: US\$ millions	2016	2017	2018	2019	2020E	2021F	2022F	2023F	2024F	2025F	2020-25 CAGR
Digital OOH advertising	86	89	106	118	106	123	150	168	174	181	11.4%
Physical OOH advertising	76	65	64	60	47	54	52	49	46	43	-1.8%
Total revenue	163	154	169	178	152	177	202	216	219	224	8.0%



Traditional TV and home video

Taiwan has a mature pay-TV market, with 6.3mn households paying for subscription services in 2020, giving an overall penetration rate of 88.1% (including cable TV 63.7% and IPTV 22.3%). Despite this high take-up, the market faces pressure from OTT streaming services and a shift in viewing habits. Set-top box piracy has also been a problem for the TV industry. As a consequence, TV subscription revenue is set to decline at a -2.1% CAGR from US\$1.7bn in 2020 to US\$1.5bn in 2025, with the overall penetration rate falling to 69.8% (cable TV 45.7%, IPTV 21.8%), or 4.9mn households, in 2025.

The previously dominant cable-TV sector is now seeing falling subscriber numbers amid increasing competition from IPTV and unregulated OTT content providers (though a bill is under consideration to regulate such services). The proposed implementation of a new tiered-pricing policy for cable operators, now delayed to 2022, could also impact cable TV revenues. In response, some operators are leveraging their fully digitised networks and cooperating with OTT providers and telcos to also provide VOD services, high-definition 4K content and broadband services to attract or retain subscribers.

Sole IPTV operator Chunghwa Telecom, Taiwan's largest telecom operator, leads the local pay-TV market with 2.1mn subscribers as of January 2021 for its multimedia on demand (MOD) service. Recent developments supporting MOD subscriber growth include a 2019 regulatory change allowing the company to package MOD channels freely to satisfy user demand, its launch of pick-and-pay TV packages, and tie-ups with Netflix and other partners to enrich its content offering.

Besides pay TV, the physical home video sector is in long-term decline. It will shrink by a CAGR of -19.1% over the forecast period to US\$188mn in 2025, representing 12.6% of total traditional TV revenue, down from US\$543mn (32.7%) in 2020.

Traditional TV and home video in Taiwan

Unit: US\$ millions	2016	2017	2018	2019	2020E	2021F	2022F	2023F	2024F	2025F	2020-25 CAGR
TV subscription	1,706	1,740	1,798	1,766	1,662	1,728	1,712	1,657	1,604	1,496	-2.1%
Electronic through-TV-subscription	50	52	53	53	51	51	52	52	53	53	0.9%
Non-through-TV subscription	1,657	1,688	1,746	1,713	1,611	1,677	1,660	1,605	1,552	1,443	-2.2%
Physical home video	903	819	733	636	543	455	376	305	242	188	-19.1%
Total revenue	2,610	2,558	2,531	2,402	2,205	2,183	2,088	1,962	1,846	1,684	-5.3%

TV advertising

Taiwan's TV advertising market has been in decline for several years, partly due to a shift in consumers' viewing habits towards subscription-based media sites and advertisers seeing increasing opportunity in digital media campaigns.

After a -1.4% contraction in TV advertising spend in 2019, the onset of COVID-19 caused total market revenue to plummet by -11.3% to US\$831mn in 2020, although an advertising recovery was seen in the second half of the year as domestic consumption started to recover. However, the market suffered a setback in May 2021 following a serious COVID-19 outbreak in Taiwan that led to a semi-lockdown nationwide. Once the pandemic wanes, a return to growth of 1.6% CAGR over the next five years will see TV advertising revenue reach US\$901mn in 2025, though still well below 2019 levels.

Multichannel advertising accounts for the largest proportion of overall market revenues, due to a strong pay-TV sector, with a 59% share of total TV ad spend in 2020, followed by terrestrial channel advertising at 33.9%. Both sectors will see their market revenue shares reduce slightly over the next five years as online TV advertising gains traction. With more people in Taiwan using connected devices and streaming video, online TV advertising revenue is set to expand at a CAGR of 8.5% over the forecast period to reach US\$89mn (9.9% market revenue share) in 2025, up from US\$59mn (7.1%) in 2020.

TV advertising in Taiwan

Unit: US\$ millions	2016	2017	2018	2019	2020E	2021F	2022F	2023F	2024F	2025F	2020-25 CAGR
Broadcast TV advertising	947	925	903	882	772	821	831	822	830	812	1.0%
Multichannel TV advertising	590	581	570	559	490	521	528	523	529	519	1.1%
Terrestrial TV advertising	357	344	333	323	282	299	302	298	301	294	0.8%
Online TV advertising	30	39	47	55	59	65	71	78	85	89	8.5%
Total revenue	976	964	950	937	831	885	902	900	914	901	1.6%



Video games and e-sports

Taiwan has a sizeable, healthily-growing video games market with an estimated 14.5 million active gamers generating total revenue of US\$2.4bn in 2020, ranking it the 10th-largest globally, and set to rise to US\$3.0bn in 2025 at a 4.7% CAGR.

Social/casual gaming dominates the market with over 60% of video games revenue and rising. The sector is projected to expand at a 5.8% CAGR to US\$1.9bn by 2025, supported by a well-developed mobile phone network, with high smartphone penetration and growing 5G coverage. Also, Taiwan's position as a Chinese-speaking market without major content restrictions means it has easy access to both Western- and Chinese-developed titles, like *Pokémon GO and Arena of Valor*.

Revenue growth will also remain steady in the traditional gaming sector, at a 3% CAGR to 2025. PC games dominate with a 70%+ share due to a strong gaming café culture, with revenue mainly coming from in-game purchases and subscriptions, reflecting the popularity of free-to-play competitive multiplayer online titles like *League of Legends and Overwatch*. In contrast, the smaller console segment will struggle for growth due to its dependency on shrinking physical sell-through.

Competitive video gaming, or esports, is burgeoning in Taiwan, boosted by government recognition of it as a legitimate sport in 2017 and the high local popularity of online PC gaming. The Taiwan market is attracting attention from international video game developers, including Blizzard Entertainment and Garena, which have established dedicated esports venues in the capital city Taipei, as well as from local gaming hardware brands and others as sponsors of teams and tournaments.

There are roughly 200-300 professional esports players on the island. Taiwan's prowess in esports was reflected by a local team winning the Arena of Valor International Championship 2020, which obtained 109 million cumulative views across the entire tournament and was recognized by YouTube as one of the most-watched live gaming events of 2020 globally.

Video games in Taiwan

Unit: US\$ millions	2016	2017	2018	2019	2020E	2021F	2022F	2023F	2024F	2025F	2020-25 CAGR
Social/casual gaming	863	955	1,017	1,265	1,440	1,572	1,670	1,753	1,833	1,907	5.8%
App-based	776	873	940	1,194	1,373	1,509	1,610	1,697	1,781	1,857	6.2%
Browser-based	88	82	77	71	66	63	59	56	53	50	-5.6%
Traditional gaming	790	833	863	893	940	996	1,017	1,041	1,066	1,091	3.0%
Console games	235	240	245	248	258	265	269	271	272	272	1.0%
- Digital sell-through	41	48	55	62	69	74	77	80	82	85	4.2%
- Online/microtransaction	1	1	1	2	2	2	2	3	3	3	10.7%
- Physical sell-through	193	191	188	184	188	189	190	189	187	184	-0.4%
PC games	555	594	618	645	682	731	748	770	793	819	3.7%
- Digital sell-through	19	20	20	21	22	24	24	25	26	26	3.9%
- Online/microtransaction	535	573	597	623	659	707	723	744	767	792	3.7%
- Physical sell-through	1	1	1	1	1	1	0	0	0	0	-44.6%
Video games advertising	10	11	12	13	14	14	14	15	15	16	2.6%
Total revenue	1,663	1,800	1,892	2,171	2,394	2,582	2,701	2,809	2,914	3,013	4.7%

Note: E-sports data is not available for the Taiwan market.



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