

THE ECONOMIC CONTRIBUTION OF FILM AND TELEVISION IN CHINA IN 2017



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1. KEY FINDINGS

China's film and TV industry made a large contribution to the domestic economy in 2017...

The Chinese film and TV industry made a direct contribution to domestic GDP worth 312 billion yuan in 2017. This amounted to 0.34% of GDP generated in the country¹.

The television industry made up the largest component of this, contributing 249 billion yuan to Chinese GDP in 2017, a total of 81% of the combined film and TV

industry (Fig. 1)². Within this, Free-to-Air (FTA) TV contributed a total of 80 billion yuan to GDP. Cable TV contributed an additional 43 billion yuan to GDP. IPTV contributed a total of 11 billion yuan to GDP.

A variety of other TV services made a contribution to GDP worth 115 billion yuan. This covers a broad range of activities including distribution, artist performances, external production services and the sale of broadcast rights, with these services collectively growing robustly.

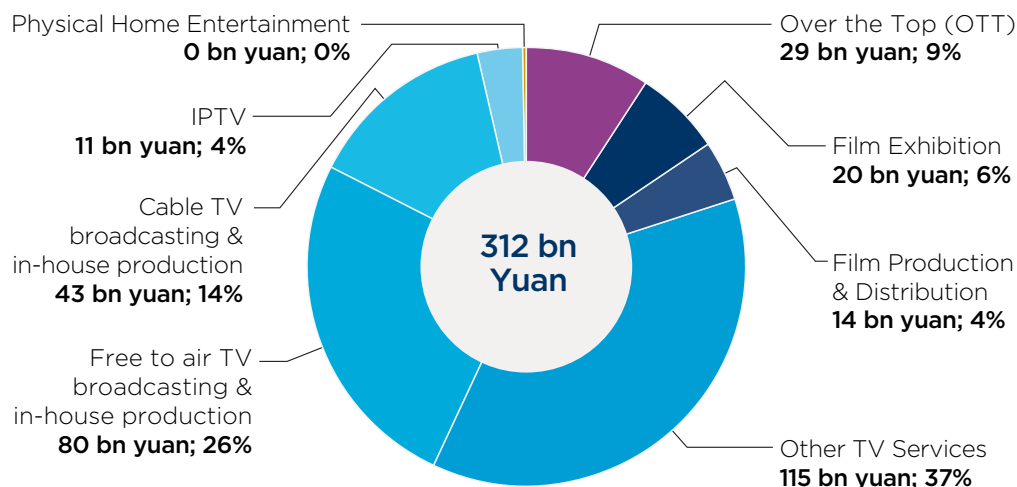
The film industry supported a contribution to Chinese GDP worth 34 billion yuan. The largest share of this was film exhibition, worth 20 billion yuan, with production and distribution of films contributing 14 billion yuan.

Over-the-top (OTT) entertainment made a contribution to GDP worth 29 billion yuan in 2017. Physical home entertainment made a small contribution, worth approximately 100 million yuan.

... with this activity supporting nearly 1.3 million jobs ...

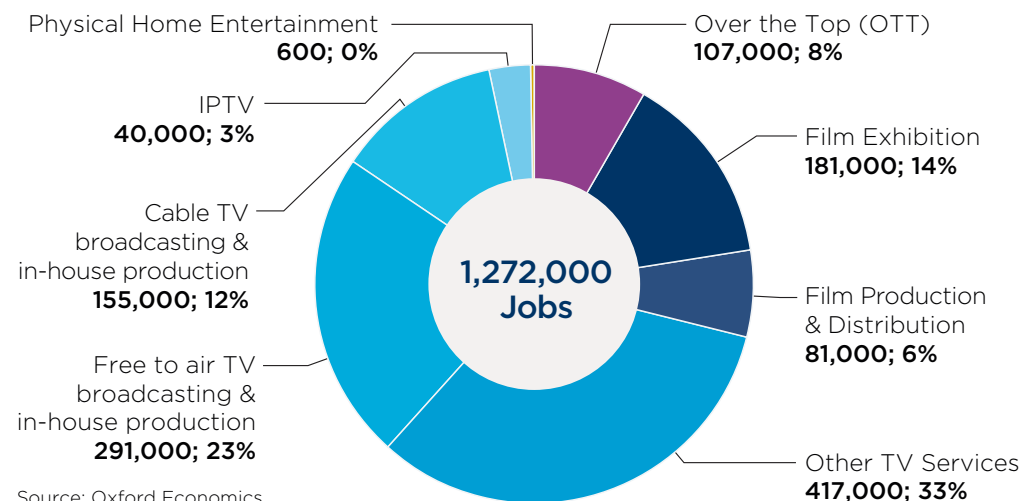
The television industry again sustained the largest share of this, totalling 903,000 jobs in 2017. Of this, FTA TV employed a total of 291,000 people directly, with a further 135,000 in cable TV services and 417,000 across a range of other TV services. IPTV contributed 40,000 jobs in the country in 2017.

Fig. 1: Direct contribution of Chinese film and TV to domestic GDP, 2017



Source: Oxford Economics

Fig. 2: Direct employment of Chinese film and TV, 2017



Source: Oxford Economics

¹ All figures in this report (including text citations, charts and tables) are subject to rounding. Likewise, reported percentages may not total exactly to 100 due to rounding.

² Throughout this report, measures of GDP reflect GDP at basic prices (also known as Gross Value Added or GVA) rather than the market price measure usually given headline status in official statistics. See the 'Detailed Methodology' section at the end of this report.

The film industry within China supported a total of 262,000 jobs in 2017. This consisted of 181,000 jobs in film exhibition and 81,000 in film production and distribution.

Outside of this, OTT supported 107,000 jobs, with physical home media directly employing 600 people.

In total, the 1.3 million people employed directly by the Chinese film and TV industry in 2017 represented 0.16% of the country's employment.

... contributing large amounts in tax revenues ...

The activities of the film and TV industry directly supported a total of 67 billion yuan in tax revenues in China in 2017.

Of this, the largest share, 54 billion yuan, came from the television industry. A total of 17 billion yuan from FTA TV, 9 billion yuan from cable TV, 25 billion yuan from other TV services and 2 billion yuan from IPTV.

The film industry supported a direct contribution to tax revenues worth 7 billion yuan, driven by 4 billion yuan from film production and distribution and 3 billion yuan from film exhibition. Alongside this, OTT contributed 6 billion yuan.

... with the jobs sustained being highly productive.

The average employee working in the film and TV industry produced a direct contribution to GDP worth 245,000 yuan in 2017. This varied between TV and film, averaging 276,000 yuan per worker across the TV and OTT industries and 128,000 yuan per worker in the film industry.

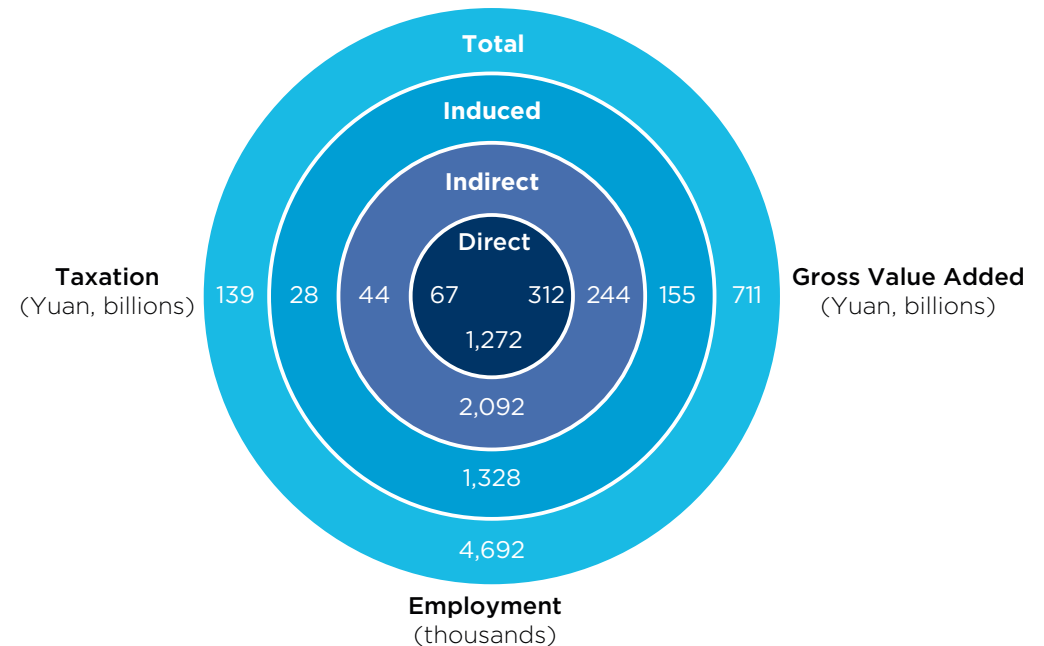
The industry as a whole boasts labour productivity levels which are more than double the level that is seen across the whole of the Chinese economy, where the average contribution to GDP per worker totalled 117,000 per worker.

The industry's total footprint is boosted by significant multiplier effects.

The overall economic contribution is boosted by the presence of a substantial supply chain (the indirect impacts) and a significant amount of consumer spending, as direct and indirect employees make purchases out of their earnings (the induced effects).

In total the indirect effect made a contribution to GDP worth 244 billion yuan, with a further 155 billion yuan coming from the induced effect. This amounts to a total contribution to GDP of 711 billion yuan. Together, this means that the industry has a multiplier of 2.3, indicating that for every 10 billion yuan of direct contribution to GDP, a total contribution worth 23 billion yuan was made (including the direct 10 billion yuan).

Fig. 3: Economic contribution of the Chinese film and TV industry, 2017



The direct employment that the industry supports is supplemented by an indirect employment footprint of 2.1 million jobs and an induced employment of 1.3 million jobs. Accounting for all of this, the total employment footprint of the industry totalled 4.7 million. This equates to a multiplier of 3.7.

Fig. 4: Total economic contribution of film and TV industry and its components, 2017

	Gross Output (Yuan, billions)		GDP (Yuan, billions)		Employment (thousands)		Tax (Yuan, billions)	
	Direct	Total	Direct	Total	Direct	Total	Direct	Total
Free-to-Air TV	157.1	367.1	80.4	182.9	291	1,171	17.4	36.0
Cable TV	83.4	195.0	42.7	97.2	155	622	9.2	19.1
Other TV Services	224.7	525.1	115.0	261.6	417	1,675	24.9	51.5
IPTV	21.5	50.3	11.0	25.1	40	160	2.4	4.9
Total TV	486.7	1,137.5	249.0	566.8	903	3,629	53.8	111.5
Over-The-Top	57.6	134.7	29.5	67.1	107	430	6.4	13.2
Film Exhibition	40.3	95.9	20.1	47.2	181	414	4.1	9.1
Film Production and Distribution	25.0	56.8	13.6	29.5	81	218	2.8	5.7
Physical Home Entertainment	0.2	0.5	0.1	0.3	1	2	0.0	0.1
Total Film	65.6	153.2	33.7	76.9	262	633	6.9	14.8
Total	609.9	1,425.3	312.2	710.8	1,272	4,692	67.1	139.5

Numbers may not sum to totals due to rounding

HOW WE ARRIVED AT THESE FIGURES

Oxford Economics was commissioned by MPAA to assess the economic contribution of the film and television industries in China.

The starting point for the estimates in this report was provided by official statistics published by the National Radio and Television Administration (NRTA) in the 'Blue Book of China's Radio, Film and Television' ('the Blue Book'). The most recent version of this publication was released in 2018 and provides statistics relating to the 2017 calendar year.

DIRECT ECONOMIC CONTRIBUTION

The GDP, employment and tax contributions due to the activities of businesses in the film and television industries themselves are referred to as the direct contributions.

Direct gross output (i.e., revenue) for film and television is based on figures reported in Blue Book. Television employment is also based on figures reported in Blue

Book. This data is combined with other official economic data at the appropriate level of industrial detail to obtain estimates of direct GDP, employment, taxation and earnings for film and television industries. For example, GDP estimates utilise the relationship between gross output and GDP for the "Radio, television, film and video recordings" sector from official Input-Output tables. For further details of the methodology please see Chapter 8.

ADDITIONAL ECONOMIC CONTRIBUTIONS

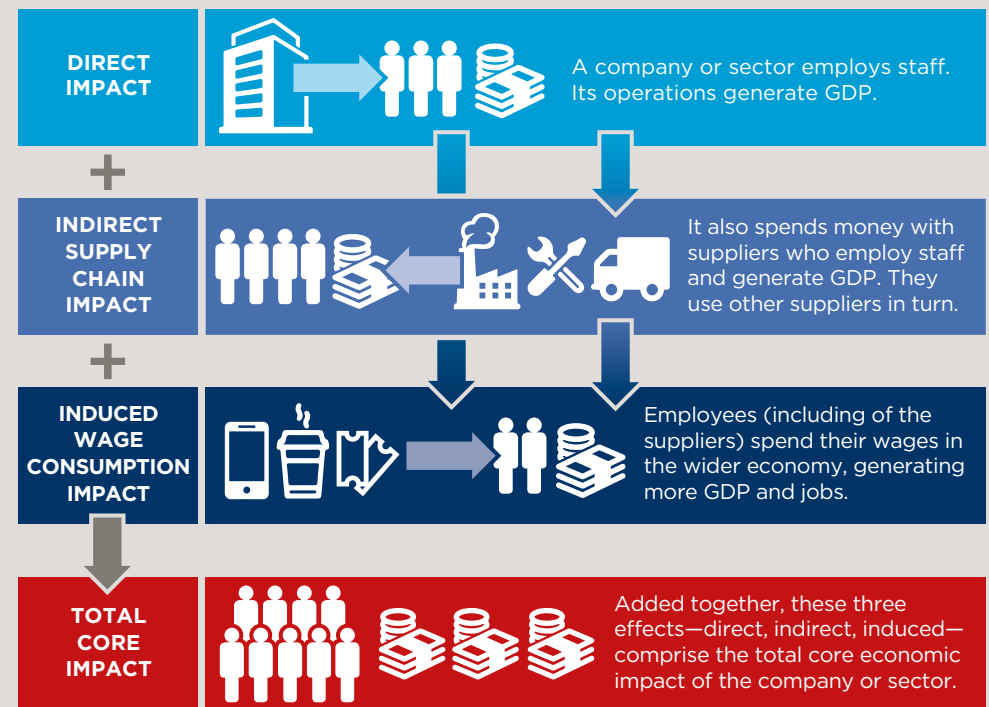
The **total economic contribution** of the film and television industries on the Chinese economy takes into account two further channels of economic contribution:

- **Indirect contributions**, which relate to the output and jobs supported via the purchases of goods and services by Chinese film and television companies from firms located in China; purchases by these suppliers in turn, and so on throughout the supply-chain.

- **Induced contributions**, which are the output and jobs supported by the consumer spending of workers in film and television and other employees in the supply chain.

The contribution of these two "multiplier" effects is quantified from the official 2012 China Input-Output tables (the most up to date detailed tables available), which provide data on the pattern of purchases for industry sectors and households in the economy. For further details please see Chapter 8.

Fig. 5: Illustration of economic impact framework



2. FILM INDUSTRY

This section considers the economic contribution made by different components of the Chinese film industry. This includes the combined film production and distribution sector, film exhibition and physical home entertainment. It also examines the consistent growth that has been seen in the Chinese film industry over the last decade.

2.1 FILM PRODUCTION AND DISTRIBUTION

In 2017, the Chinese film production and distribution industry supported a contribution to GDP worth 29.5 billion yuan. The largest portion of this was a direct impact which totalled 13.6 billion yuan. This was supported by an indirect contribution through its supply chain worth 9.4 billion yuan. The consumer spending induced as direct and indirect employees consume out of their earnings contributed 6.5 billion yuan.

This economic activity supported a total of 5.7 billion yuan in tax revenues. Nearly half of this came through the direct impact, which was worth 2.8 billion yuan.

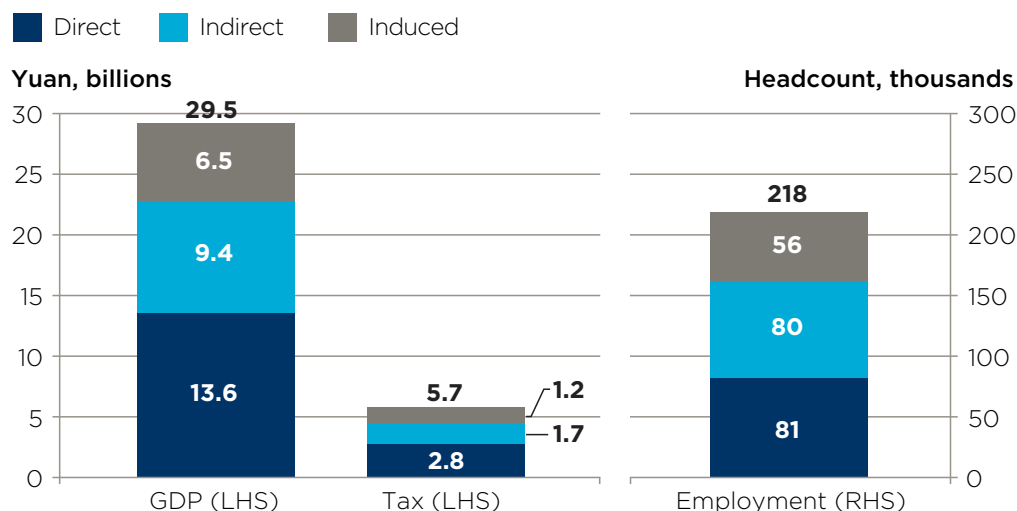
The film production and distribution industry was responsible for a total employment footprint of 218,000 jobs in 2017. Of this, 81,000 jobs were supported directly by firms in the industry. An indirect contribution of 80,000 jobs were sustained through the supply chain, with an induced impact contributing 56,000.

2.2 FILM EXHIBITION

The largest component of the Chinese film industry is the exhibition of both domestic and international films in Chinese movie theatres. In 2017, a total of 1.6 billion tickets were sold in theatres across the country, a record high for the country.

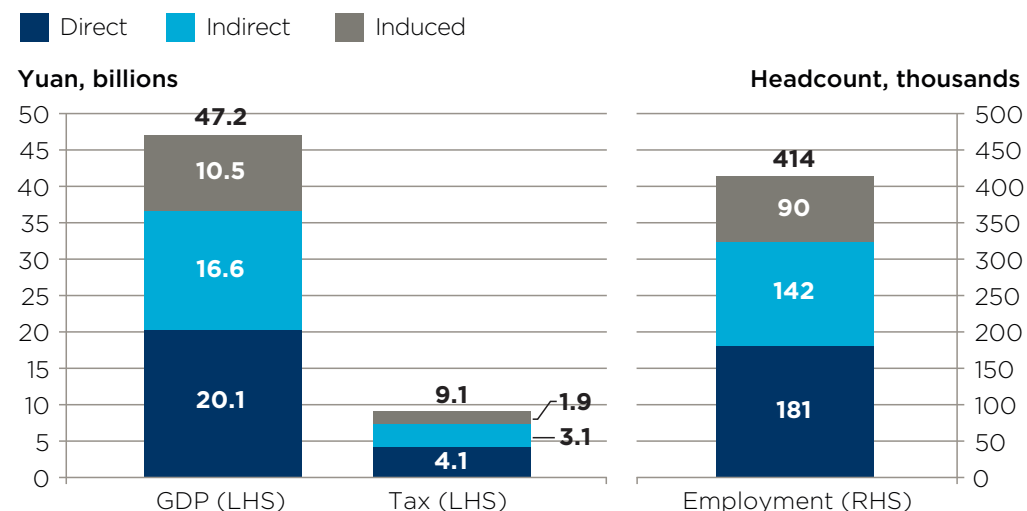
Film exhibition made a contribution to Chinese GDP worth 47.2 billion yuan in 2017 (Fig. 7). This consisted of a contribution from its direct

Fig. 6: Economic contribution of film production and distribution in 2017



Source: Oxford Economics

Fig. 7: Economic contribution of film exhibition in 2017



Source: Oxford Economics

activities, which was worth 20.1 billion yuan, supplemented by an indirect impact worth 16.6 billion yuan and an induced impact worth a further 10.5 billion yuan. Together this drove a contribution to tax revenues worth a total of 9.1 billion yuan, of which 4.1 billion yuan came from direct activities.

In total, film exhibition was responsible for sustaining 414,000 jobs in China in 2017. This consisted of a direct contribution which sustained 181,000 jobs, an indirect contribution of 142,000 jobs and a further 90,000 sustained through the induced contribution.

2.3 PHYSICAL HOME MEDIA

Alongside production, distribution and exhibition of films, there is still some demand for physical home media products such as DVDs and Blu-ray disks. In 2017, 13.1 million DVDs were sold in China, with a further 200,000 Blu-ray disks sold.

In 2017, home media was responsible for a contribution to Chinese GDP worth 253 million yuan (Fig. 8). Of this, a total of 105 million yuan was contributed directly. A further 89 million yuan was generated through the industry's supply chain, with 59 million yuan also generated through the induced consumer spending. Through

all three channels of impact, physical home entertainment was responsible for a 54 million yuan contribution to tax revenues, 24 million yuan coming directly.

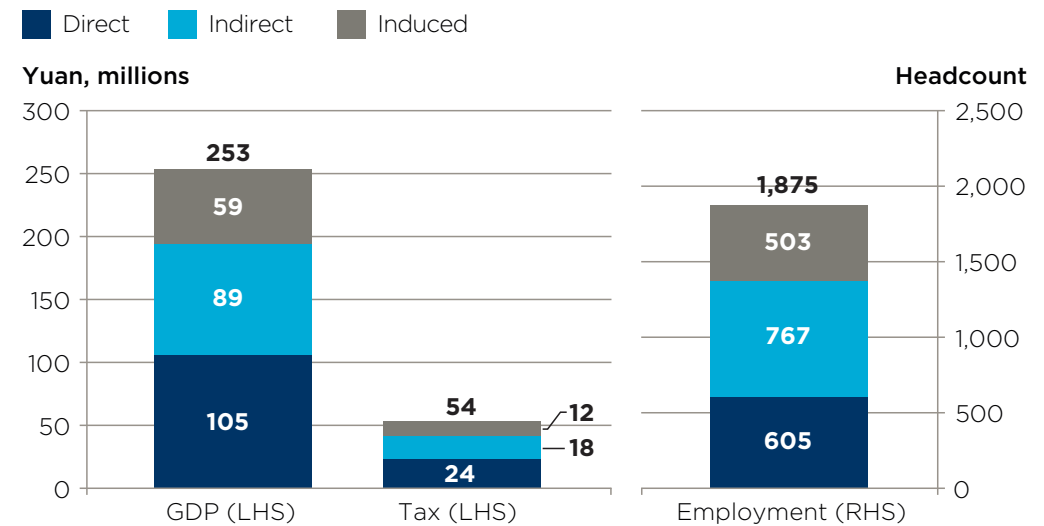
The physical home media industry sustained a total of nearly 1,900 jobs in 2017. This consisted of a direct employment of 600 jobs, nearly 800 supported in its supply chain and a further 500 supported through induced consumer spending.

2.4 TRENDS IN FILM EXHIBITION

Cinema attendance growth in China is a key driver of growth in the film industry as a whole. In 2017, 1.62 billion cinema tickets were sold in China, an increase from 1.37 billion in 2016 (Fig. 9), representing an 18% increase.

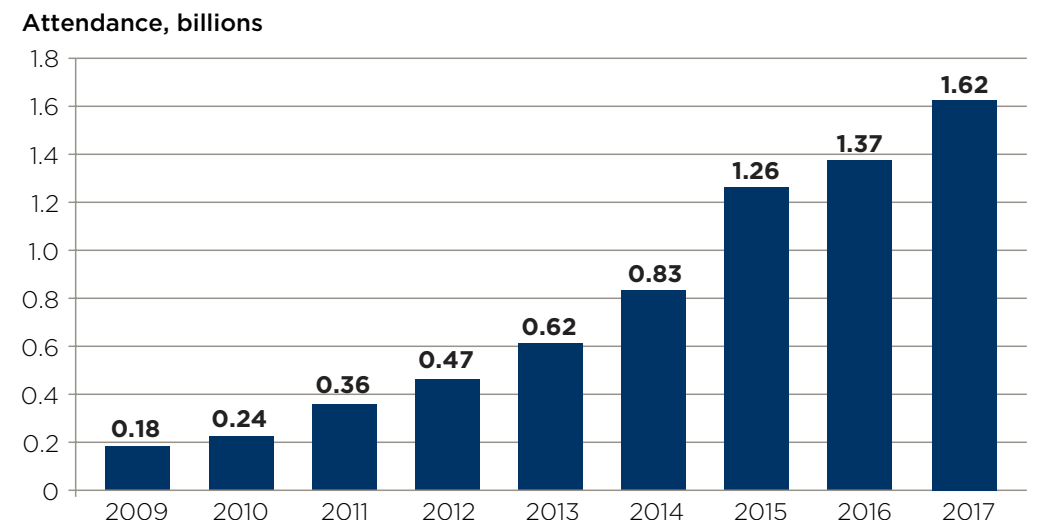
This annual increase is a reflection of a long and consistent period of growth for the sector. Since 2009, the total box office attendance at Chinese cinemas has increased by nearly 800%, with every single year boasting increased attendance.

Fig. 8: Economic contribution of physical home media in 2017



Source: Oxford Economics

Fig. 9: Total cinema attendance in China, 2009 to 2017



Source: Oxford Economics, National Bureau of Statistics of China

3. TELEVISION INDUSTRY

This section details the economic contribution that is made by different sectors in the Chinese TV industry. TV broadcasting in China consists of free-to-air, cable and IPTV. This section also considers a range of other production and technical TV services. Over the top (OTT) services are covered in a separate section of this report.

3.1 FREE-TO-AIR TV

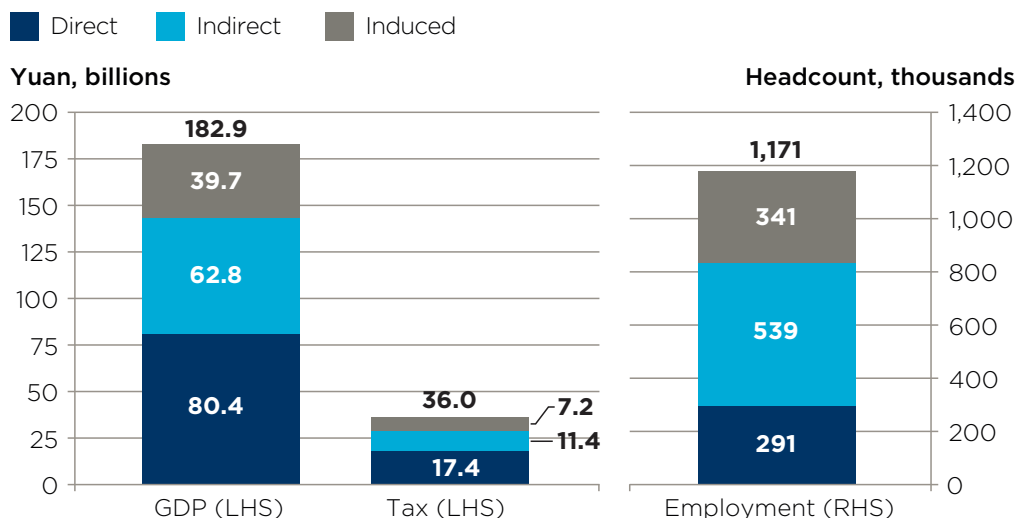
The largest component of TV broadcasting in China is free-to-air (FTA) TV. This consists of the production and broadcasting of FTA TV. Channels reach consumers without charges or subscription, instead relying on advertising and other revenues. The state broadcaster CCTV (Chinese Central Television) is the primary broadcaster.

In 2017 FTA TV made a total contribution to GDP worth 182.9 billion yuan (Fig. 10). The largest share of this was made through its direct impact, which totalled 80.4 billion yuan. The industry's supply chain was responsible for supporting an indirect contribution to GDP of 62.8 billion yuan, whilst there was an additional 39.7 billion yuan generated by induced consumer spending.

3.2 CABLE TV

This section analyses the economic contribution made in cable TV production and broadcasting. Cable TV comprises of subscription TV services including both digital and paid-digital packages. In 2017 there were an estimated 198 million households subscribing to digital cable TV services, with a further 22 million using analog services³.

Fig. 10: Economic contribution of free-to-air TV in 2017



Source: Oxford Economics

A large amount of tax revenue was generated through this activity, totalling 36.0 billion yuan. Nearly half of this (17.4 billion yuan) came from the direct activities of firms working in FTA TV.

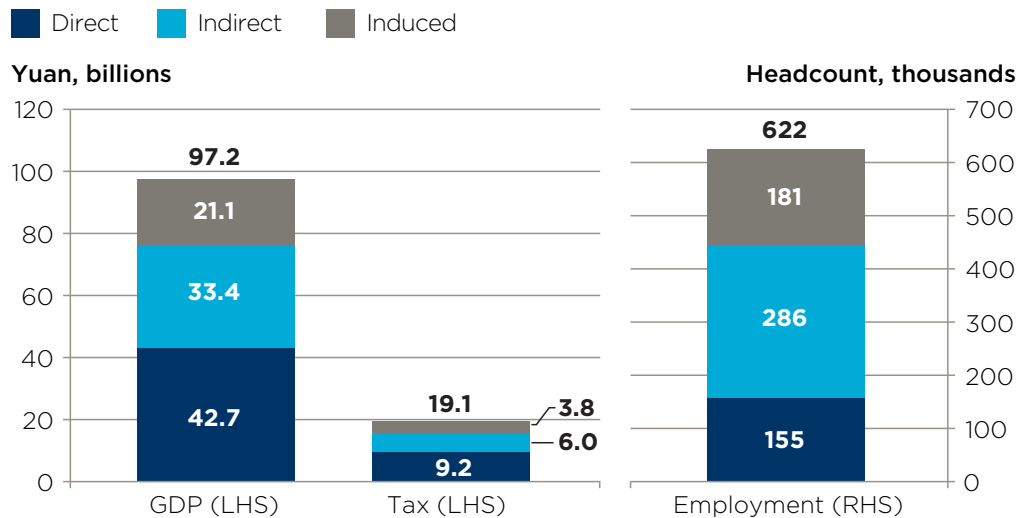
In total, 1.71 million people were employed by FTA TV in 2017. This consisted of 291,000 employed directly. The indirect effect is large, supporting a total of 539,000 jobs, with a further 341,000 employed due to induced effects.

Cable TV made a total contribution to GDP of 97.2 billion yuan in 2017 (Fig. 11). Of this, a 42.7 billion yuan came from its direct activities. A further 33.4 billion yuan was generated through the supply chain, with 21.1 billion yuan generated through the consumption activities of direct and indirect employees. In total, 19.1 billion yuan of tax revenues was generated through this activity, the largest component coming in the form of a 9.2 billion yuan direct contribution to tax revenues.

The cable TV sector sustained a total of 622,000 jobs in China in 2017. Of this, 155,000 were supported by the direct activities of the sector, 286,000 indirectly through its supply chain and 181,000 through induced consumer spending.

³ Based on data provided by Digital TV Research (DTR).

Fig. 11: Economic contribution of Cable TV in 2017



Source: Oxford Economics

While these figures are sizable, the direct and total GDP and employment figures appear to represent a decline on those estimated in the previous version of this report, covering film and TV activities in 2016⁴. While caution on making such comparisons should be exercised, given potential categorical and other changes in Chinese data this decline would appear to be genuine and may be due to the impact of OTT services on revenues. This issue is examined in more detail in the section of this report dealing with OTT.

3.3 OTHER TV SERVICES

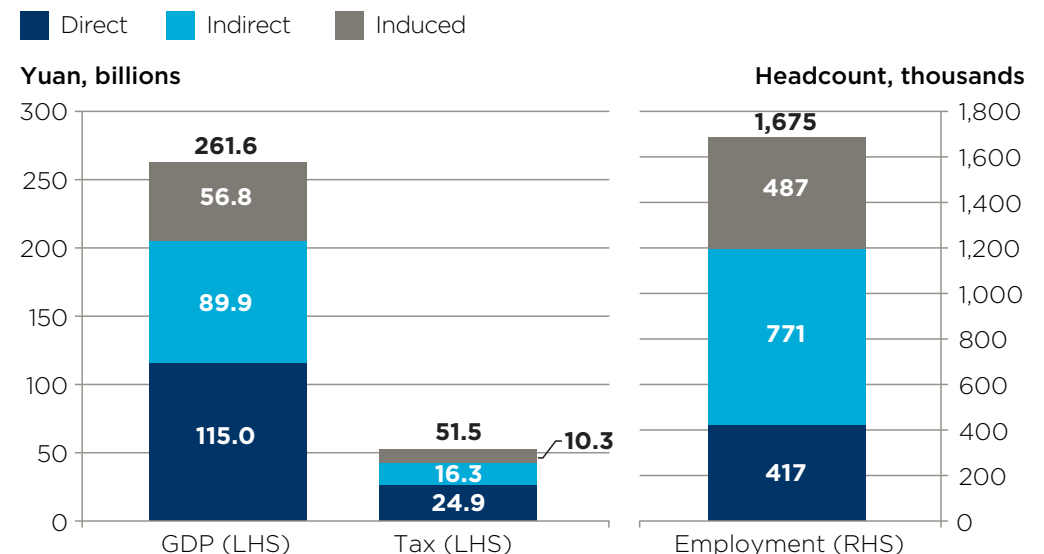
A large additional impact is made through what are officially designated in the Blue Book as Other TV services. These services cover a broad range of activities including: distribution, sales of external artist performances, external production services, sale of broadcasting rights, co-productions, technical consultation and services, external business services, intangible asset transfers, donations, asset leases interest and other activities.

Collectively this sector made a contribution to Chinese GDP worth 261.6 billion yuan in 2017. The largest share of this was generated through direct activities, totalling 115.0 billion yuan. A further 89.9 billion yuan was generated through the supply chain, with another 56.6 billion yuan generated through induced consumer spending.

These activities were responsible for generating 51.5 billion yuan in tax revenues. Close to half of this (24.9 billion yuan) came from the direct contribution.

Other TV services supported an employment footprint totalling 1.68 million jobs. A total of 417,000 of these jobs came directly from firms in the sector. The indirect impact totalled 771,000 jobs, with 487,000 more from the induced contribution.

Fig. 12: Economic contribution of other TV services in 2017



Source: Oxford Economics

⁴ Oxford Economics (2017), The Economic Contribution of Film and Television in China, 2016

3.4 IPTV⁵

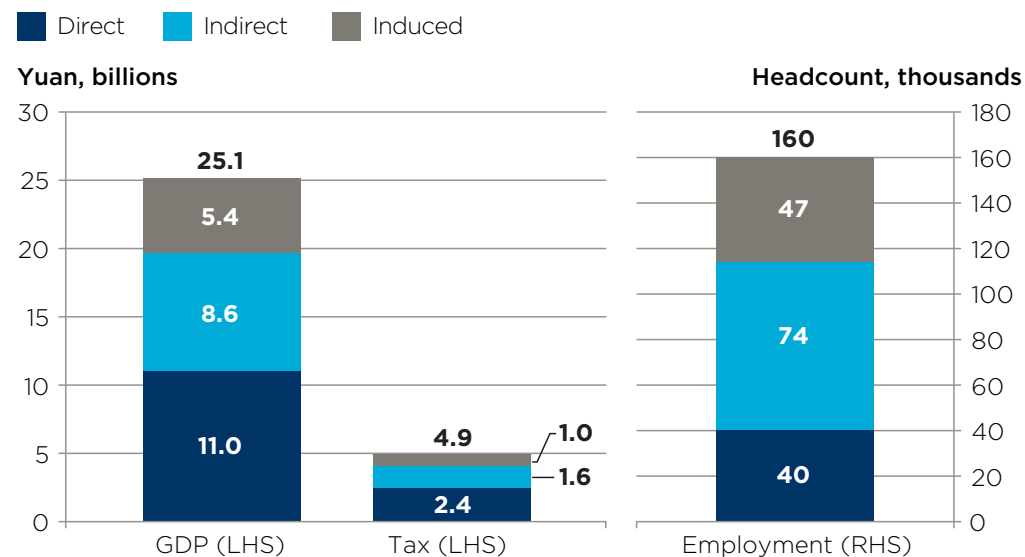
Of the new technologies influencing the way that television media is being consumed, one of the most significant is IPTV (Internet Protocol Television). IPTV involves the distribution of traditional TV content over the internet. The number of subscribers is estimated to have risen rapidly from 15 million in 2011 to 122 million in 2017.⁶

In 2017 IPTV was responsible for an overall contribution to GDP worth 25.1 billion yuan. A total of 11.0 billion yuan of this came directly from the activities of firms working in the sector. This was supplemented by 8.6 billion yuan from the firm's indirect contribution and a 5.4 billion yuan induced contribution.

Together these activities, IPTV was responsible for tax revenues worth 4.9 billion yuan. A total of 2.4 billion yuan of this were derived from the direct activities.

IPTV was responsible for an employment footprint totalling 160,000 jobs in 2017. A quarter of these 40,000 came as a result of the direct activities of firms in the sector. An additional 74,000 came through the indirect effect, with a further 47,000 through the induced contribution.

Fig. 13: Economic contribution of IPTV in 2017



Source: Oxford Economics

⁵ The figures in this section have been revised since our previous report *The Economic Contribution of Film and Television in China, 2016*. The current report uses a new data source (DTR) which has a more conservative take on IPTV's base revenue figures, though still sees the sector as growing very rapidly. This source also provides figures for OTT below, allowing for greater consistency in quantifying the impact of these two types of new media.

⁶ Based on data supplied through Digital TV Research (DTR)

4. OVER THE TOP (OTT)

4.1 OTT ECONOMIC CONTRIBUTION

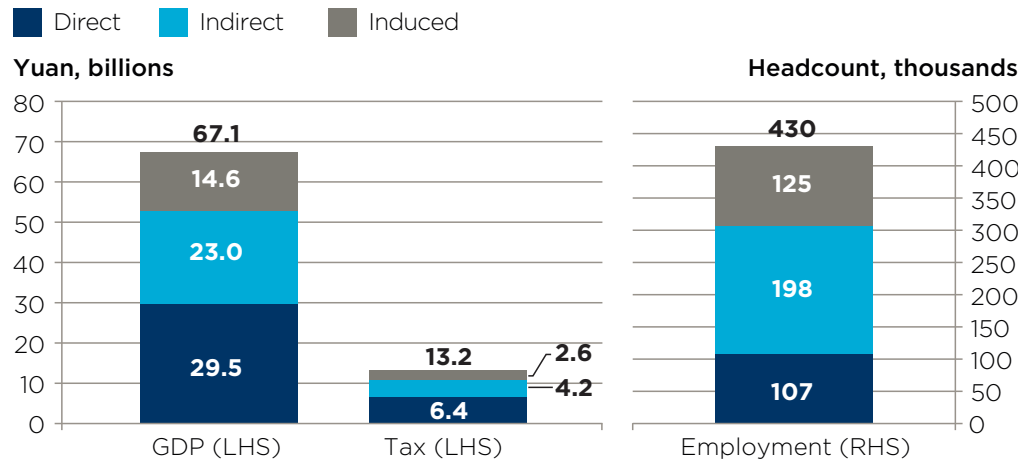
Over-the-top (OTT) media involves the distribution of streaming products through the internet, bypassing traditional media platforms such as cable and network TV.

In 2017, OTT was responsible for an economic footprint that equated to a 67.1 billion yuan contribution to GDP. A total of 29.5 billion yuan of this came through the direct activities of firms in the industry. This was supported by a 23.0 billion yuan

contribution from its supply chain and 14.6 billion yuan from induced consumer spending. This activity supported a total of 13.2 billion yuan in tax revenues, with 6.4 billion yuan coming through direct activities.

In total, OTT was responsible for sustaining 430,000 jobs in China in 2017. A total of 107,000 of these jobs were contributed directly. A further 198,000 were through the indirect effect and 125,000 through the induced impact.

Fig. 14: Economic contribution of OTT in 2017



Source: Oxford Economics

⁷ Based on data supplied through Digital TV Research (DTR)

⁸ *Ibid.* Note that DTR has revised the 2016 and other historical figures used in the previous version of this report due to a change in methodology, 2017 figures reflect both growth and this methodological change.

⁹ Note that changes in these splits since last year largely reflect revisions to DTR methodology as well as industry developments.

4.2 CURRENT MARKET

As is the case with societies around the world, China has witnessed an explosion of online media in recent years with a particular focus on mobile platforms.

Data from Digital TV Research (DTR), a TV industry consultancy indicates that Smartphone subscribers grew from 47 million in 2010 to just over 1 billion in 2017. Tablet subscribers grew from 1 million to 125 million during the same period.⁷

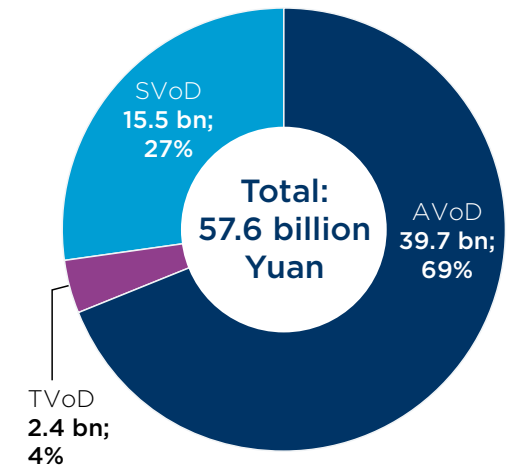
The growth in these media has led to large amounts of film and TV content being consumed online. The GDP impact of China's internet streaming – or OTT – market has been quantified above. It is also possible to break down the gross revenue of the OTT market into Advertising Video on Demand (AVoD), Subscription Video on Demand (SVoD) and Transactional Video on Demand (TVoD). As its name suggests, AVoD refers to streaming services supported by advertising revenues while SVoD refers to services which require users

to pay a regular subscription fee. TVoD refers to one-off purchases such as movie rentals and purchases.

Total revenue across all platforms was 2.1 billion yuan in 2010, of which approximately 2 billion was AVoD, 66 million SVoD and 12 million TVoD. This compares to 57.6 billion yuan in revenues across all platforms in 2017.⁸ The chart below indicates the revenue split of OTT in 2017.

Fig. 15: OTT revenue split: 2017⁹

Billion Yuan; % share



Source: Digital TV Research

As indicated, AVoD accounts for the majority of OTT revenues, though its share of total platform revenues has fallen from 96 percent in 2010 to 69 percent in 2017, while SVoD's has risen from 3 percent to 27 percent. There have been determined efforts to encourage people into SVoD in order to boost profitability in the face of fierce competition.

The biggest SVoD providers include Tencent Video (35 percent of SVOD revenues), iQiyi (31 percent) and YouKu Tudou (16 percent).¹⁰

4.3 INDUSTRY GROWTH

As indicated, OTT growth has been very rapid in China in recent years. This reflects trends in Western countries as well as the very fluid and evolving nature of the Chinese media and online markets and rapid national economic growth.

DTR estimates that revenues from Chinese OTT TV and video reached US\$8.8 billion (or close to 58 billion yuan) in 2017. They forecast that escalating OTT growth will deliver over 70 billion yuan in revenues by 2023.¹¹ The charts below indicate

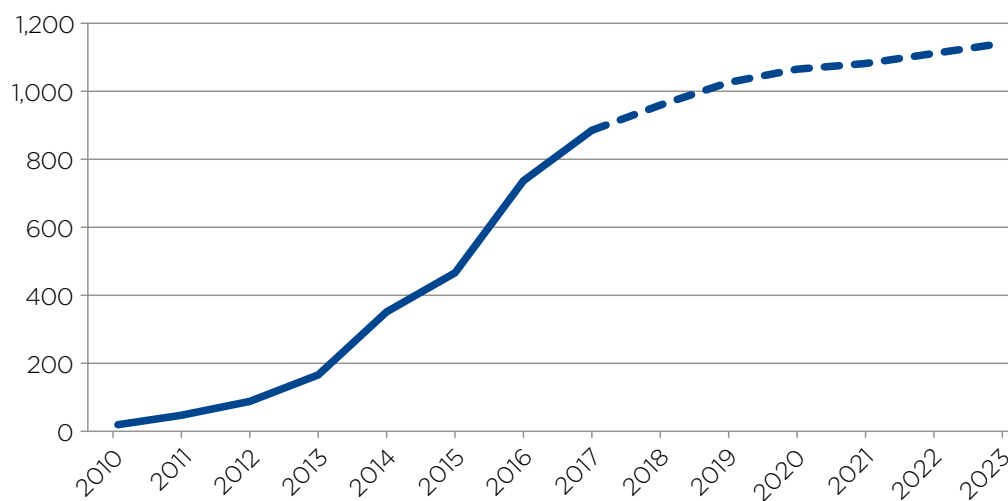
DTR's most recent estimates of the growth in Chinese OTT users and revenues from 2010, including forecasts to 2023. These charts follow a typical "S shaped" product diffusion curve, characterised by a low initial base, rapid growth and finally a growth slowdown as a market saturation point is reached.

4.4 TECHNOLOGY AND VIEWING BEHAVIOUR

High historical and projected growth is, in part, promoted by the inherent technological advantages of OTT, including the breadth and diversity of content available, flexibility in viewing locations and mediums, and the variety of price differentiation strategies available to providers to lock-in low cost customers. The improvement of broadband services has also enabled high market growth. This flexibility is not commonly available to the traditional free-to-air or cable TV.

Fig. 16: Estimated OTT users, 2010-2023

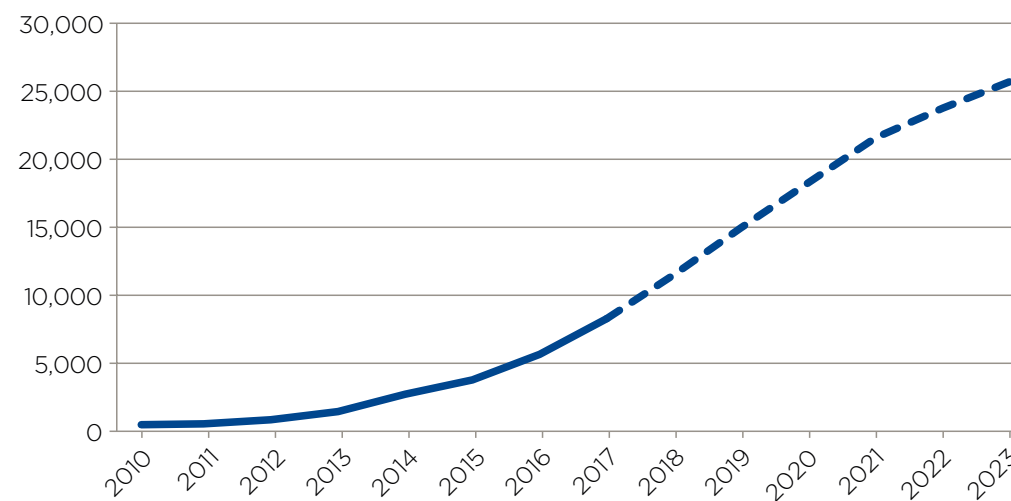
Users, millions



Source: DTR

Fig. 17: OTT revenues, 2010-2023

US\$, millions



Source: DTR

¹⁰ Based on data supplied through DTR

¹¹ Digital TV Research (2018). *China OTT TV & Video Forecasts*

Most OTT viewing takes place through mobile platforms. Of the estimated 881 million OTT users in 2017 (compared to 23 million in 2010), 685 million (or 78 percent) accessed content through Smartphones, with the remainder using fixed broadband connections.¹² Wide smartphone use in China highlights the massive potential upside in the market as these devices are so heavily used.

Current technologies are also helping providers develop their content led strategy (discussed in more detail below). For example iQiyi has made use of its owner Baidu's expertise in artificial intelligence to analyse user preferences and push tailored content.¹³

Future rollouts also hold the promise of strong OTT growth. The advent of 5G technology, holds the potential for much faster internet speeds than 4G. This in turn could allow for new premium offerings such as virtual or mixed-reality productions.¹⁴

4.5 BUSINESS MODELS, COMPETITION AND THE FUTURE

There may be some evidence that the rapid growth of OTT is affecting Cable TV revenues. While some caution should be exercised in making year to year comparisons due to the changing nature of Chinese data and media categories, cable TV revenues appear to have fallen slightly in 2017, relative to 2016. The Blue Book's discussion of Chinese TV industry developments in 2017 refers to falling cable TV revenue, attributing it in part to 'alternative viewing services'¹⁵. DTR also refer to cable TV losing subscribers to OTT.¹⁶

Part of the appeal of OTT may be the greater variety of product offerings. DTR reports that this is particularly appealing to younger Chinese, disappointed with the lack of choice (and lack of foreign content) on traditional TV channels. To some extent this is also true for OTT where government regulations state that 70 percent of content

must be local. Nonetheless, while keeping within government regulations on foreign titles, foreign content accounts for half of the 2,600 TV episodes provided by Youku Tudou, a key industry player.¹⁷

YouTube is banned in China and the government regulatory environment also makes it unlikely that major Western operators such as Netflix or Amazon Prime will open up in the country in the near future. Major OTT platforms, however have been able to bridge this gap somewhat. All three major OTT platforms have signed multiple deals with US media and entertainment companies. For example, iQiyi signed a content deal with Fox in January 2016 and another with Netflix in April 2017. Tencent has signed deals with Warner Bros and HBO, while Youku Tudou has signed distribution deals with NBC Universal and Disney.¹⁸

Given that none of the major OTT platforms (as yet) turns a profit, all key market players are focussed on a move to SVoD (and away from AVoD model in particular). The production of content is a key part of this strategy. iQiyi's content spending alone reached 12.6 billion yuan in 2017, up from 7.5 billion yuan in 2016. iQiyi's recent hit local content shows include *The Rap of China*, which recorded 2.6 billion views for its 12 episodes. While figures for 2017 do not yet appear to be available, the number of OTT premium dramas produced rose from 36 in 2015 to 239 in 2016. Both Tencent and iQiyi produced over 30 premium dramas each in 2016, compared to Netflix's 29. Other sources report 1,892 online movies produced for streaming services in 2017, as compared to 689 titles in 2015.¹⁹

¹² *Ibid*

¹³ *Forbes*, 'The Billion-Dollar Race to Become The Netflix of China', 7 March, 2018, <https://www.forbes.com/sites/ywang/2018/03/07/the-billion-dollar-race-to-become-the-netflix-of-china/#4f1c77543495> accessed 14 November 2018

¹⁴ Based on data supplied through DTR

¹⁵ National Radio and Television Administration (NRTA) *Annual Report on China's Radio, Film and Television* (2018), pp.112-130.

¹⁶ Digital TV Research (2018) China OTT TV & Video Forecasts

¹⁷ *Ibid*

¹⁸ *Ibid*

¹⁹ *Ibid*; *Forbes*, *op. cit.*; *ChinaFilmInsider.com*, 'Chinese Video Giants are Becoming Production Powerhouses', 13 October, 2017, <http://chinafilminsider.com/chinese-video-giants-are-becoming-production-powerhouses/>, accessed 14 November 2018 ; *The Hollywood Reporter*, 'iQiyi, the 'Netflix of China', Leverages Local Online Movie Boom', 5 April, 2018, <https://www.hollywoodreporter.com/news/iqiyi-netflix-china-leverages-local-online-movie-boom-1099550>, accessed 14 November 2018

A disadvantage of the content driven subscription strategy is that production costs for premium content can be high. Some estimates suggest that premium local content costs 10-15 million yuan per episode or two to three times production costs of two years ago. Even a hit show such as the *Rap of China* may only be at the breakeven mark, with most of the revenue coming from major advertisers. At the same time, while they have turned to subscription, Chinese consumers have shown limited willingness to pay large amounts for such services. Licensing fees for local and foreign content may also be high. However, the silver lining is that an exclusive content/subscriber model can be used to charge for premium services such as exclusive premiere's or ad free experiences as well as allowing for the sale of commercial IP through publishing, distribution, licensing and gaming products. *The Rap of China* for example, may have produced some 200 distinct products.²⁰

Smaller players have also been focussing on investing in content, with Bilibili focussed on animation content, PPTV on sports and Douyu TV on games.²¹

These business models are expected to evolve as major market players find the right balance between content-driven subscription and ad-based services in order to drive longer term sustainability. Sources of funding and methods of cooperation – between producers and service providers, and across media sub-industries – will allow the market to become increasingly responsive to customer preferences. Indeed, the entire Chinese entertainment industry is becoming more collaborative than ever before, with alliances between technology providers, content providers, distribution channels and advertising platforms, among others.

²⁰ *Variety*, 'APOS: China's Booming Streaming Market is Opening to Speciality Platforms', 25 April 2018 <https://variety.com/2018/digital/asia/china-booming-streaming-market-opening-to-specialty-platforms-1202786146/>, accessed 14 November 2018; Forbes, *op. cit.*; ChinaFilmInsider, *op.cit.*

²¹ *Variety op. cit.*

5. EXPORTS

In 2017, the Chinese film industry was responsible for a total of 4.25 billion yuan worth of exports. While there is also a limited market in the export of TV series (estimated at \$85 million or 558 million yuan in 2017) the combined export market of 4.8 billion remains small with film and TV exports estimated as being responsible for only 0.03% of Chinese exports in 2017.²² This situation may change in the future however with the explosion of OTT services, as detailed above. Cinedigm Corp for example hopes to soon begin streaming Chinese content direct to US homes, with the aim of appealing to both Chinese speakers and younger English speakers interested in international content.²³

²² National Radio and Television Administration (NRTA) *Annual Report on China's Radio, Film and Television* (2018) ; China Daily, 'Chinese TV drama internationalization' 14 June 2018, <http://www.chinadaily.com.cn/a/201806/14/WS5b220d70a31001b8257222c5.html>, accessed 15 November 2018

²³ The Hollywood Reporter, 'Cinedigm to Launch US OTT Channel Dedicated to Chinese Content' 17 April, 2018 <https://www.hollywoodreporter.com/news/cinedigm-launch-us-ott-channel-dedicated-chinese-content-1103280>, accessed 14 November 2018

6. TOURISM

The development of China's film and TV industry has stirred interest in film and TV tourism and its benefits. Film and TV attractions have become a recognised driver of tourism in China over the last two decades. The sub-industry is still rather nascent, it is growing quickly. Many shooting locations for film and TV programs are now famous tourist destinations in China.²⁴

Although it may be that some *foreign* visitors are induced to visit China due to Chinese film and TV productions, there is insufficient evidence of this phenomenon and it is therefore not possible to quantify how important it may be to the national economy. Nonetheless, a variety of Chinese academic studies and media reports have pointed to the fact that Chinese film and TV productions are encouraging *domestic* tourism.

Unfortunately, these studies are typically focussed on film and TV induced tourism to specific sites and do not allow for any comprehensive

national assessments to be drawn. Alternatively, there is a considerable body of literature and media articles that describe a strategic connection between tourism and China's film and TV industry, without local supporting evidence (e.g. visitation, tickets sold etc.). As is the case for international tourism, it is not possible to quantify the overall economic contribution of film and TV induced domestic tourism.

However, a number of key studies have identified induced tourism effects within China, including:

- Zhang and Ryan (2018) provide a broad overview of the history of Chinese film tourism. The authors point to a variety of historical case studies, including that of the impact of the broadcast of *Qiao Family* in 2006. This saw tourism revenues at the Qiao Family house at Shanxi more than double from 24m yuan in 2005 to 56.8m yuan in 2006. More recently, they cite research by Mafengwo, China's largest travel information sharing website

indicating that 42 percent of post-1990's generation travellers visited destinations as a result of the location being featured in their favourite film or TV series. However these locations need not be in China, with popular examples including Japan and Sri Lanka.²⁵

- Xu and Reijnders (2017) find that Hengdian World Studios encourages domestic tourism to experience the working film experience, though this study primarily focuses on 'extras' in films.²⁶
- Meng and Tung (2016) focus more explicitly on the tourism experience at Hengdian. While comprising of a relatively small sample, this suggests that a large proportion of visitation is female and originates from neighbouring provinces. Key motivations included the potential for meeting celebrities or film crews, experience a taste of the past and to see how historical relics and periods are represented.²⁷
- In a study of the impacts of Chinese TV drama *Flowing Time* which is set in *Black Town*, Huang (2013) examines the sociological framework that supports media tourism. The author considers the different roles of tourists, the tourism industry and local residents. The paper goes on to argue that the program in questions can create place-myths, with this reinforced by the various industry workers. Through interviewing these workers, the ability of this mythology to provide an enduring draw to tourists is illustrated.²⁸
- Hao and Ryan (2013) analyse the role played by the 1986 film *Hibiscus Town* in driving Chinese tourism. The analysis focusses on the imagery created during a pivotal time in the country's history. This focusses on a range of elements to the film, including scenic images, food, and architecture, described collectively as the 'language' of the film.²⁹

24 Jinmei, W, 'Analysis and strategic suggestions for China's film and TV tourism', *Green Book of China's Tourism*, (2013), p. 185

25 Zhang, X. and Ryan, C., (2018) 'Grand View Garden and a History of Chinese Film Tourism', in *Film Tourism in Asia* Evolution, Transformation, and Trajectory, Sangkyun, K. and Reijnders, S (Eds.)

26 Xu, M., Reijnders, S (2017), 'Inside the Chinese Film Industry: On the Motives and Experiences of Extras at Hengdian World Studios', *Film Tourism in Asia*, pp. 171-184, Springer, Singapore.

27 Meng, Y. and Tung, V., 'Travel Motivations of Domestic Film Tourists to the Hengdian World Studios: Serendipity, Traverse and Mimicry', *Journal of China Tourism Research* (2016), Vol. 12, No.3-4

28 G Huang, "Mediating Tourist Landscape: A Case Study of Media-Induced Tourism in China", *International Journal of Communication*, 7 (2013): 2678-96.

29 X. and Ryan, C. Hao, "Interpretation, Film Language and Tourist Destinations: A Case Study of Hibiscus Town, China", *Annals of Tourism Research*, 42 (2013): 334-58.

- Pan and Chen (2009) considered Peach Blossom Island in Zhejiang Province, where ‘The Eagle Shooting Heroes’ and other films based on the works of Jin Yong. A total of 45 percent of visitors surveyed in 2007 reported that the works and films were an influence in their choice. Out of all the respondents, 50 percent wanted to have an experience connected to TV and film, with 22 percent wanting to see specific filming locations.³⁰
- Pan (2005) analysed the impact of CCTV productions centred in Hengdian and Xinchang, identifying large increases in tourism in both. In the case of the latter, tourism increased from 452,000 in 1998 to 1.4 million in 2002. This increase coincided with the filming and release of CCTV productions “Swordsman” and “Hero”, though obviously there may have been many other reasons for the rise of visitor numbers, such as a general rise in prosperity and tourism throughout China.³¹

The impact that film and TV has had on boosting tourism has led to a focus on utilising it to this end. For example, Ran and Lu see film-based tourism as one way of boosting tourist numbers to less visited areas such as Xinjiang. The authors call for a multi-pointed promotional program, involving active cooperation between local film and tourism authorities, including stepping up publicity efforts, creating a ‘culture of film tourism’ and improving local tourist facilities to increase their attractiveness to film-related tourists.³²

In the media, visitation and income flows have been attributed to specific film and TV destinations, with varied supporting revenue evidence. The development of facilities specifically dedicated to film and TV tourism can be dated to the development of Wuxi Taihu Lake in 1987.³³ Examples of film and TV “cities” (or production bases) that are renowned for

attracting tourism include; Hengdian, Changchun Film Studios and Movie Wonderland, China Film Huairou Production Base, Xiangshan, Shanghai Film Chedun, Ningxia Xibu, Zhongshan, Bei Putuo, Tongli Shooting Base, Zhenbeibu China West Film Studio, Jiaozuo and Zhuozhou. Film festivals, such as the Shanghai International Film Festival, also pull large visitor crowds.

Overall it is estimated that China hosts nearly 1,000 film and TV production bases, many catering to both production and tourism to some extent. However, while some of these are major tourism drawcards, few run at an overall profit on paper. Some domestic research suggests that 80 percent of production bases run at a loss, with 15 percent breaking even and only 5 percent profitable.³⁴ Nonetheless, as the primary aim in most cases is to produce films (and as facility revenues are often split between tourism,

production and other revenues) the relative contribution of each tourism revenues to this picture is uncertain.

Specific examples of major tourism drawcards include:³⁵

- *Hengdian*: Tourist trips to Hengdian World Studios, sometimes dubbed the ‘Hollywood of China’ reached some 18.7 million in 2017. While it is difficult to separate out revenues for the facility itself, visits to the attraction were reported to have brought in some 16.7 billion Yuan in tourism revenues to Dongyang the city where the facility is located in 2016.³⁶
- *Xiangshan Film City*: Xiangshan Film and TV City reported an operating income of 44.8 million yuan for the first three quarters of 2017, driven by 1.26 million tourist trips.³⁷

³⁰ Pan, L., Chen, H (2009), ‘Study on the Tourism Development in Non-theme Park Movie Locations: A Case Study of Taohua Island in Zhejiang’, *Journal of Subtropical Resources and Environment*, Vol. 4, No.3.

³¹ Pan, L., (2005), ‘The Impacts of Movies—Making on the Locations Tourism Development: A Case Studies of Hengdian and Xinchang’, *Economic Geography*, Vol 25, No. 6.

³² Ran, H and Lu, Y, (2006), ‘A Discussion on the Development of Film and Television Tourism in Xinjiang’, *Journal of Xinjiang Normal University*, 25 (3)

³³ *Jiadianxinwen.com*, ‘Analysis of the Influence of Tourism in Xiangshan Film and Television City’, 25 November 2017 <http://www.jiadianxinwen.com/internet/20171125/9160.html>, accessed 12 November 2018

³⁴ *Ibid*

³⁵ While this report focusses on 2017, some of these data relate to a variety of recent years. The aim here is to provide the most recent tourism data available.

³⁶ *YiCai Global.com*, ‘Hengdian looks to airport business to prop up movie, tourism operations’, 20 August 2018, <https://www.yicai.com/news/hengdian-looks-airport-business-prop-movie-tourism-operations>, accessed 11 November 2018 ; *Global Times.cn*, ‘Tourism Bonanza’, 29 August 2017 <http://www.globaltimes.cn/content/1063759.shtml>, accessed 11 November 2018; *South China Morning Post*, ‘Behind the scenes of the Hollywood of China’, 25 February 2017, <https://www.scmp.com/magazines/post-magazine/long-reads/article/2073419/behind-scenes-hollywood-china>, accessed 11 November 2017

³⁷ *Jiadianxinwen.com*, ‘Analysis of the Influence of Tourism in Xiangshan Film and Television City’, 25 November 2017 <http://www.jiadianxinwen.com/internet/20171125/9160.html>, accessed 12 November 2018

- *Shanghai Film and TV Park* – Created by the Shanghai Film Group, this park specialises in recreating “Old Shanghai.” For both tourism and film production purposes. Revenues were reported as 100 million yuan in 2017, with a net profit of 15 million yuan. Film and TV tourism accounts for half of the Park’s revenues.³⁸
- *Zhongshan Film and TV City* – is one of the major Chinese film and TV cities. The area has particular significance being the original hometown of the Chinese revolutionary leader Sun Yet-sen, a fact which has an influence on both local tourism and the nature of the shoots in the region. The film and TV city receives some 6 million visitors per year, with operating revenue reported as ‘stable’.³⁹

- *Oriental Movie Metropolis* – Opened in April 2018, this 400 acre studio, accommodation and theme park complex at Qingdao is set to rival Hengdian in scale and ambition.⁴⁰

The overall conclusion is that there appears to be significant development potential for domestic film and TV tourism, particularly given the rise in Chinese tourism and real incomes, with domestic tourism across all China as a whole reported as exceeding 5 billion trips in 2017.⁴¹ However, the sector still faces challenges in terms of ensuring the longer term profitability of many facilities.

It also remains the case that comprehensive national level data on film induced tourism are elusive. The same is true for evidence of foreign film-induced tourism. This situation may change as the industry develops in future years.

³⁸ *Zhongshan Government Portal*, ‘Let’s go and open the horizon’, 11 August 2017 <http://www.zsrdzx.gov.cn/main/view/index.action?did=2&id=1376>, accessed 12 November 2018

³⁹ Ibid

⁴⁰ BBC News 28 April, 2018 ‘Chinese firm Dalian Wanda opens \$7.9bn ‘movie metropolis’ <https://www.bbc.com/news/world-asia-china-43935491>, accessed 11 November 2018

⁴¹ CCTV.com, ‘National Tourism Administration: In 2017 the number of domestic tourists in China exceeded 5 billion’, <http://m.news.cctv.com/2018/02/06/ARTIJxcZJSBhUsmVWb2c7Oyq18Q206.shtml>, accessed 14 November 2018



7. EMERGING ISSUES

7.1 CITY LEVEL FILM EXHIBITION MARKET

The Chinese cinema exhibition market has been the subject of particular interest in recent years, linked to the rapid rate of cinema construction in the country and the general development of Chinese consumer markets.

A common approach to analysing the Chinese market (whether in the area of entertainment or commodities in general) is to divide its cities into 'Tiers'.⁴² These range from Tier 1 to Tier 5, with Tier 1 cities being the largest and most populous (each having populations of over 15 million and GDP of over \$300 million) and Tier 5 being the smallest (generally small provincial cities).⁴³ A variety of factors may influence movie going in these cities, though some of these may counterbalance each other. For

example, Tier 1 city dwellers tend to be more affluent than their Tier 5 counterparts but also have a larger variety of alternative entertainment opportunities. Conversely, residents of other Tier cities may be less prosperous but have fewer alternative entertainment venues. The construction of new cinemas in smaller and less prosperous areas – such as Tier 3-5 cities – may address this lack of entertainment venues. For example Dadi Cinema Group has focussed on expansion in Tier 2-5 cities, while Hengden Entertainment has focused on Tier 3 and smaller cities.⁴⁴ At the same time, the gradual rise of incomes in such cities may also make cinema going more affordable.

The number of screens across the country as a whole is set to increase

further with China's National Film Bureau recently setting the goal of having 80,000 movie screens nationwide (up from the current 58,000) by 2020. There is to be a particular focus on smaller centres in China's central and western regions with new theatres receiving a subsidy of up to 300,000 yuan for theatre construction and 200,000 yuan for renovations.⁴⁵

Breakdowns of Tier city box office revenues in recent years have indicated the nature of the relative distribution of box office revenues. In 2012 Tier 3-5 cities collectively accounted for some 28 percent of the Chinese box office. By 2017, this figure had risen to 40 percent. While box office revenues in Tier 1 and 2 cities grew by 174 percent

between 2012 and 2017, receipts in Tier 3-5 cities grew by 354 percent.⁴⁶ It has been suggested that the growth in Tier 3-5 box office spend may reflect the greater amount of free time in those cities and increasing willingness to spend on entertainment.⁴⁷ Rising affluence, both in absolute terms and relative to top Tier cities, may also be driving a trend to spend more on entertainment, including at the box office.⁴⁸ The pace of cinema construction in such cities may also obviously be a factor. However it should also be noted that similar trends may be pulling potential cinema customers, particularly 'small-town youngsters' (aged 15-24) into alternative forms of entertainment including OTT and online music, literature and games.⁴⁹

⁴² The Tier system is not strictly official but is often used as a convenient way to sub-divide the Chinese market.

⁴³ Although there is no precise official definition, over 600 cities are sometimes classified under the Tier system with a variety of population, economic, political and industrial criteria used to distinguish between Tiers. This report has broadly followed the past definitions used by *Yicai Global*, a Chinese financial magazine. These include following the commonly accepted definition of Tier 1 cities as Beijing, Shanghai, Guangzhou and Shenzhen (sometimes referred to as "Bei-Shang-Guang-Shen"). Tier 2 cities tend to be provincial capitals. Tier 3 cities tend to be prefecture capitals. Tier 4 and 5 cities are smaller country cities, with populations of 150,000 or less. There has been a recent move to expand the definition of Tier 1 cities to encompass a broader range of urban centres, this has met with a mixed reaction. This report retains the older definition for consistency and clarity. See *CNBC* 'Netizens say one of the Chinese cities just upgraded to 'first tier' doesn't deserve the label', <https://www.cnbc.com/2017/06/11/hangzhou-dongguan-and-others-qualify-as-new-first-tier-cities-in-china.html> accessed 9 November 2018 and *Yicai.com*, '2017 'new first-line' city rankings released in Chengdu, Hangzhou, Wuhan, the top three Zhengzhou, Dongguan, new list', 31 May 2017, <https://www.yicai.com/news/5293378.html> accessed 9 November 2017.

⁴⁴ *South China Morning Post*, 'Dadi Cinema expands in smaller Chinese cities to tap stronger growth in movie ticket sales', 19 June 2017 <http://www.scmp.com/business/companies/article/2098852/dadi-cinema-expands-smaller-chinese-cities-tap-stronger-growth>, accessed 10 November 2017, and *Artisan Gateway*, *AG China Cinema Trends*, September 2017

⁴⁵ Sina, 'Film Bureau: The establishment of the cinema line company must have a minimum of 500 million in the box office last year' December 13, 2018 <https://news.sina.com.cn/c/2018-12-13/doc-ihqackac2856009.shtml> accessed 21st December 2018

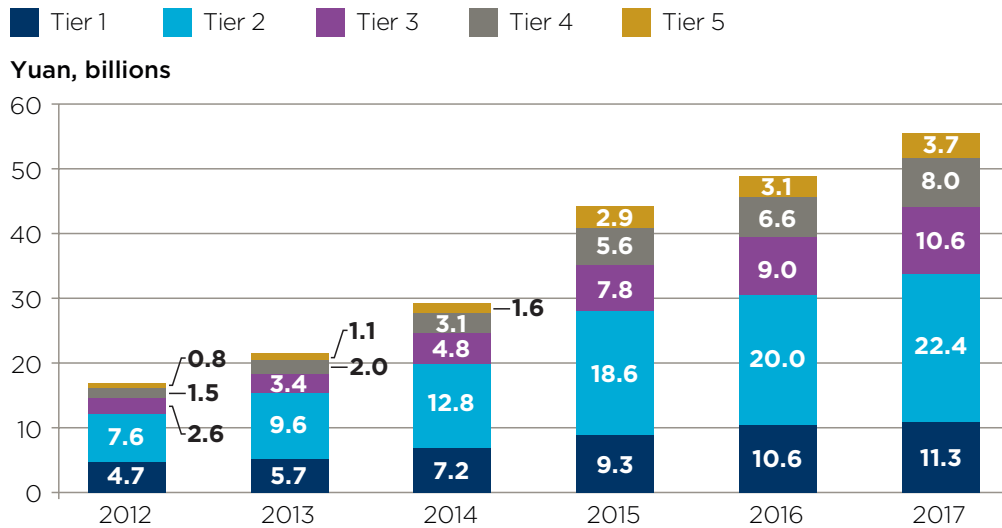
⁴⁶ China Film Yearbook Press, *2017 Chinese Film Market Review*, 2017 and Macquarie Research, *Global Movie and Cinema*, 2017

⁴⁷ *South China Morning Post*, Dadi, op. cit.

⁴⁸ Forbes, "Smaller Cities to Drive China's Consumption Boom", 14 July 2017, <https://www.forbes.com/sites/morganstanley/2017/07/14/smaller-cities-to-drive-chinas-consumption-boom/#59b0950f174d> accessed 9 November 2018

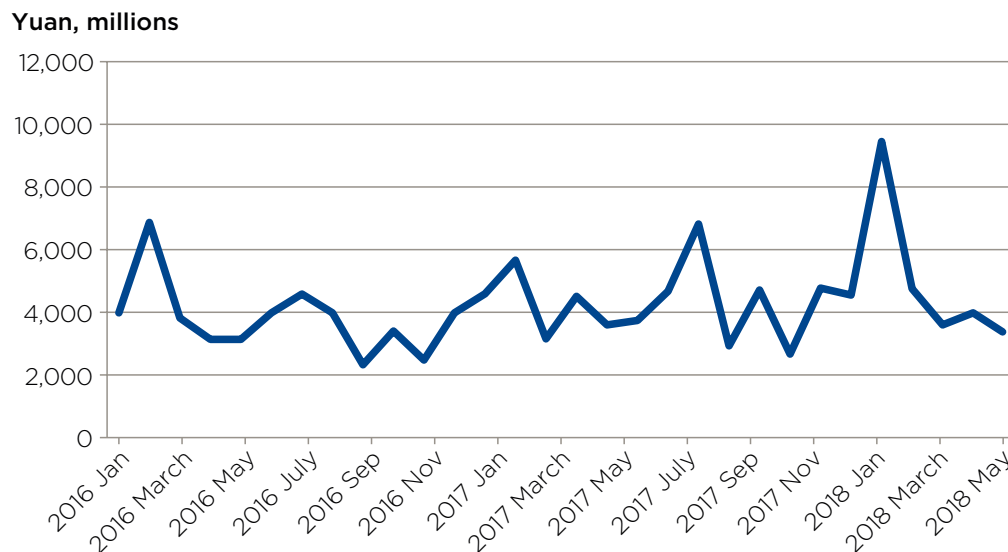
⁴⁹ Technode.com, 'Free time in smaller cities behind rapid growth in China's entertainment market', 15 December 2017, <https://technode.com/2017/12/14/small-town-youngsters/> accessed 9 November 2018

Fig. 18. Chinese box office revenue by city tier



Source: Macquarie Research, Oxford Economics

Fig. 19: Chinese total monthly box office revenue (million Yuan)

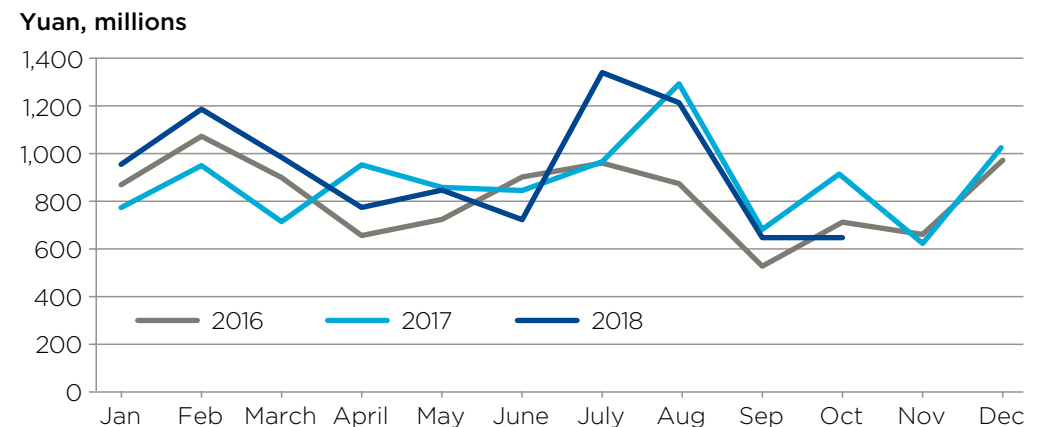


Source: Entgroup

Typically, cinema-going peaks across the nation during major festivals such as Chinese New Year (in February) and during the summer break period (July and/or August) in line with the major release schedule. This is indicated in the graph below, though it should be noted that the 'peaks' are not always of the same magnitude.⁵⁰ This may be due to factors such as the popularity of major releases, seasonal release changes and a rapidly changing entertainment market within China.

A breakdown of this revenue data by city Tier is also available.⁵¹ Any conclusions must be tentative due to the changes noted above. As noted in our previous report, Tier 3-5 cities exhibited more pronounced peaks in 2016 than Tier 1-2 cities. However, this pattern was not repeated in 2017. For example, in Tier 4 and 5 cities, 21 percent of annual box office revenues were earned in February 2016 (which included the Chinese New Year period) as opposed to 11 percent during that month in Tier 1 cities. 2017 data however do not show such a marked difference for February, with the month accounting for 9 percent of box office revenues in Tier 1 cities and 12-13 percent in Tier 4 and 5 cities.

Fig. 20: Tier 1 city box office monthly revenue: 2016-2018

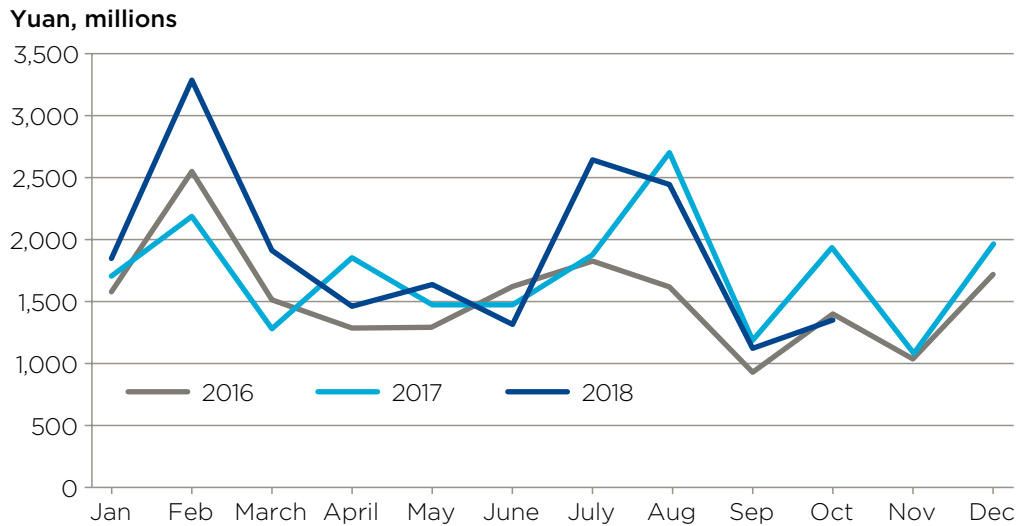


Source: Entgroup

⁵⁰ Monthly data sourced through Entgroup, 'China Box Office' <http://www.cbooo.cn/monthday> accessed 18 November 2018. Though the focus of this report is on 2017, it is instructive to compare trends across the range of available data from January 2016 to June 2018.

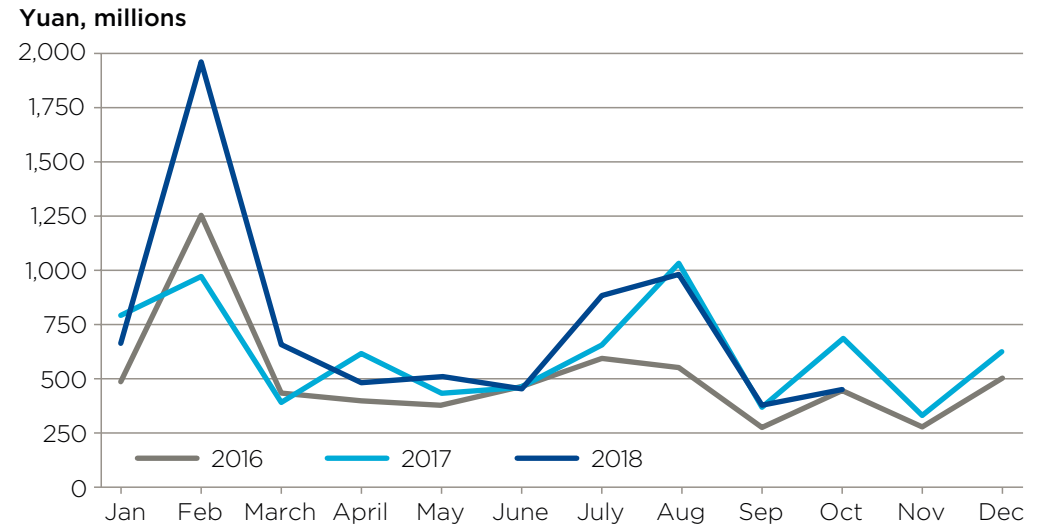
⁵¹ Entgroup, *op. cit.*

Fig. 21: Tier 2 city box office monthly revenue: 2016-2018



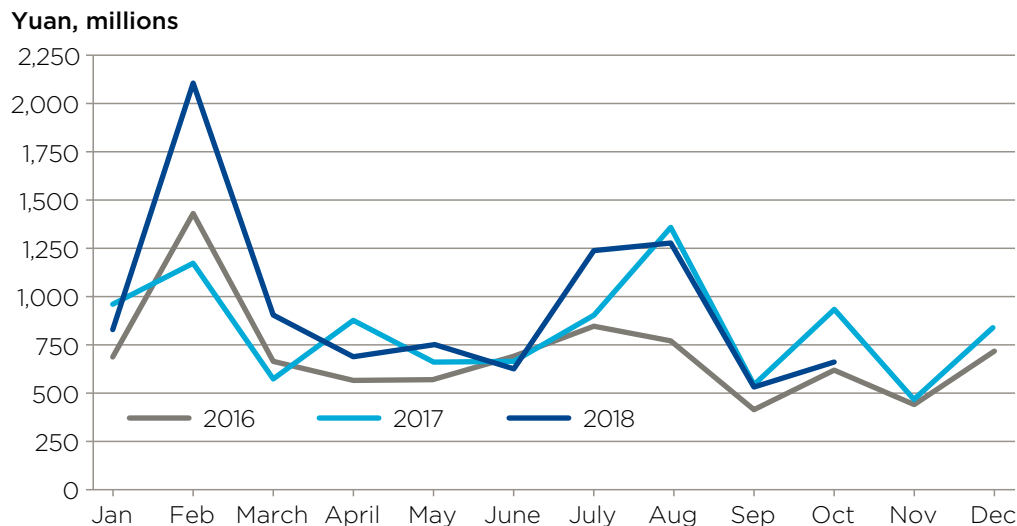
Source: Entgroup

Fig. 23: Tier 4 city box office monthly revenue: 2016-2018



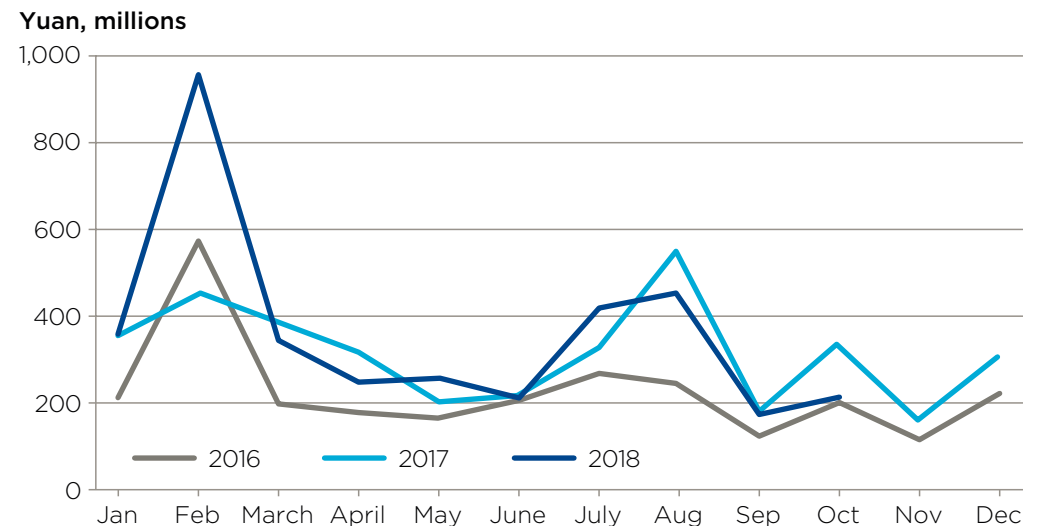
Source: Entgroup

Fig. 22: Tier 3 city box office monthly revenue: 2016-2018



Source: Entgroup

Fig. 24: Tier 5 city box office monthly revenue: 2016-2018



Source: Entgroup

It is difficult to be certain about why this is the case. However, a key factor may simply be that the Chinese New Year holiday week in 2017 was earlier than usual (lasting from January 27-February 2) which might explain the drop in February earnings across the board. It may also be that February 2017 film releases were less appealing to inhabitants at all city levels. Or it may be that alternative entertainment outlets (particularly online, as mentioned above) may be flattening the profile of behaviours across all cities, reducing the difference between different city tiers. Additional data for future years will be required to produce more definitive conclusions on such trends.

7.2 MINI THEATRE MARKET

Mini theatres are small cinemas, often run by private individuals. These have sprung up, largely unregulated in China in recent years. However an official notice on *Standardizing the operation and management of on-demand private mini theatres* was announced on 21st April 2017. This notice instituted certificates, formalising the status of mini-theatres and requiring them to possess valid film screening licenses and fire safety certificates. It also requires them to use genuine film sources and possess film distribution licenses.⁵²

In part, this edict may be aimed ensuring that revenue accrued by mini-theatres is accounted for in official film statistics and to address copyright concerns. While there are no official figures, some past estimates have suggested that there are over 10,000 mini theatres in China.⁵³

Revenue cannibalisation from mainstream cinemas and/or the need to officially record mini theatre takings may be particular concerns. Some have compared Chinese mini theatres to 'second tier cinemas' in the United States. The experience there suggests second-tier box office takings, can reach 80 percent of traditional mainstream cinemas. An accounting system which recorded mini theatre revenues and added these to conventional theatre takings could therefore move China closer to a figure of 100 billion Yuan in annual box office receipts.⁵⁴

In addition, mini theatres have begun to diversify their core business into areas such as table games, chess, coffee shops, photography, and other services. The level of sophistication has also grown in recent years. One recent trend in cities such as Shanghai is the development of mini-theatres in less trafficked,

older shopping malls. Facilities include 4K curved projection screens, high quality sound and 3-D facilities. Some reports suggest these cinemas also provide uncut versions of Western films.⁵⁵

Another recent trend has been the blurring of the OTT and mini theatre markets. Accordingly, a further set of official regulations was issued on 6 March 2018 to deal with the growing phenomenon of on-demand mini theatres. The new regulations include stipulations about the licensing of such premises, the size of such mini-theatres (screen width not to exceed 6 metres, seat numbers not to exceed 20 seats), a requirement to report revenue to a national on-demand cinema operating management information system and that their activities abide by the Constitution and achieve social and economic benefits.⁵⁶

⁵² Mtime Network 'Official introduction of "notice" strict control of private cinema' <http://news.mtime.com/2017/05/24/1569547.html> accessed 21 November 2017

⁵³ China People News 'SARFT regulation - mini theatres cannot just open' <http://media.people.com.cn/n1/2017/0503/c40606-29249822.html> accessed 21 November 2017

⁵⁴ Jiemian.com, 'Official introduction of "notice" strict control of private cinema can help China box office?' <http://www.jiemian.com/article/1343820.html> accessed 21 November 2017

⁵⁵ Smartshanghai.com, 'Watching Uncut Films at Shanghai's Biggest Private Cinema', 1 August 2016, <http://www.smartshanghai.com/articles/arts/shanghais-biggest-private-theater> accessed 9 November 2018

⁵⁶ NRTA (formerly State Administration of Press, Publication, Radio, Film and Television) 'On-demand cinema, on-demand cinema management regulations' http://www.gov.cn/gongbao/content/2018/content_5291373.htm accessed 3 December 2018

To give one example, iQiyi entered the 'bricks and mortar' cinema market with the opening of a mini theatre complex in Guangdong in May 2018. These mini theatres (ranging from two to 10 seats) will be rented by the hour and allow users to watch the company's streamed content. The company plans to develop more on-demand cinemas ('Yuke movie theatres') across other Chinese cities in the near future and hopes to make use of accompanying opportunities to merchandise content-related products. As indicated, revenues will be recorded as a part of official Chinese box office data.⁵⁷

Though no official data appear to be available, a brief examination of selected major Tier 1-3 cities using a website search indicates that some Tier 2 and Tier 3 cities appear to have more mini theatres than Tier 1 cities. For example, Zhengzhou, a Tier 3 city, appears to have the 5th largest number of mini theatres out of those surveyed. In contrast Beijing and Guangzhou (Tier 1 cities) rank 6th and 8th.⁵⁸ (Overall, of the 10 cities with the largest absolute number of mini theatres, three were Tier 1 cities, six were Tier 2 and one was Tier 3. Comparisons to the (2017) data set used for the previous version of this report also suggest that the rate at which mini theatres are being opened appears to be particularly high in Tier 3 cities, although this may also be due to starting from a low base.) The popularity of mini theatres outside Tier 1 cities may reflect differences in relative levels of affluence or other social factors.

⁵⁷ *The Hollywood Reporter*, 'China's iQiyi launches On-demand Movie Theatre Business', 21 May 2018, <https://www.hollywoodreporter.com/news/chinas-iqiyi-launches-demand-movie-theater-business-1113855> accessed 9 November 2018

⁵⁸ Based on a comparison of 61 major Tier 1-3 Chinese cities within China's four main regions using *Public Comment Network* <http://www.dianping.com/citylist> accessed 27 July 2018

8. METHODOLOGY

MEASUREMENT OF GDP

References to GDP refer to Gross Domestic Product at basic prices, which excludes taxes (less subsidies) on products. Gross Value Added (GVA) is another term for GDP at basic prices and is often used to refer to groupings of business or industries.

While taxes on products (such as indirect taxes like VAT) are excluded from GDP at basic prices, the indirect taxes generated by the film and TV industries are estimated in the main body of this report and included as a part of the industry's tax contribution.

QUANTIFYING THE DIRECT CONTRIBUTION

The analysis conducted to produce the estimates in this report are based on information produced in the "Blue Book of China's Radio, Film and Television" (the Blue Book), compiled by the National

Radio and Television Administration (NRTA).⁵⁹ The most recent version of this document is the 2017 report, which contains data referring to the 2017 calendar year.

The Blue Book details the total revenue (or gross output) of the television and film industry's main components. Physical home entertainment revenues were sourced from Screen Digest data, produced by IHS. IPTV and OTT revenues were established based on data purchased from Digital TV Research (DTR). The GDP contribution of most sectors was derived from the value added to gross output ratio in their industry established in the 2012 Chinese input-output table, accessed from the China Statistics Press. The exception to this is physical home entertainment, where the sale of DVDs and Blu-Ray disks are assumed to have both retail and distribution components, split based on the distributors' revenue as detailed in the Screen Digest data.

Chinese producers and distributors combined are estimated to have received 39.4 percent of film (box office) revenues for Chinese language films in 2017.⁶⁰ In the case of imported films, 25 percent of revenues are estimated to flow to foreign studios, with Chinese distributors estimated to retain 14.4 percent of receipts.⁶¹

Employment in television and its sub-sectors was estimated based on Blue Book data, with information on the share of the industry taken up by radio used removed from these calculations. This also allowed for the estimation of TV industry labour productivity (i.e. GDP per worker).

IPTV and OTT employment figures were based on the GDP estimates for these industries and the implied labour productivity of the TV industry, as calculated above.

Data on employment and productivity were not available for the film industry and its components. Our approach assesses the relationship between film productivity and TV productivity based on previous analysis of the industry in neighbouring countries and compares this to the radio and TV productivity which we have estimated based on Blue Book data. Analysis of the industry in South Korea, Malaysia and Taiwan revealed that film exhibition is 2.3 times less productive than TV, with film production and distribution 1.5 times less productive. This choice of countries ensures that we are basing our estimates on countries in a similar level of development, as well as being geographically close.

⁵⁹ The NRTA incorporates the former State Administration of Press, Publication, Radio, Film and Television.

⁶⁰ Macquarie Research, *op. cit.*, p.22

⁶¹ *Ibid*, p.22

Productivity (and thereby employment) in physical home entertainment is assumed to be a mixture of economy-wide productivity (for the retail margin component of home video) and average film and television productivity (for the distributors' portion of home video sales).

Tax was analysed based on our knowledge of the country's tax system applied to estimated values of industry revenue, profits and employee wage income. Income tax, social security contributions, enterprise tax and VAT were included in the calculations.

Wage income for television and film is derived from official data on earnings from 'Broadcasting, Movies, Television and Audiovisual Activities'. The wage estimates reflect the productivity differences within film and television mentioned previously. So average wages for film exhibition are 2.3 times less than television, and film production & distribution wages are 1.5 times lower than television.

Industry profits are, by definition, the difference between GDP and total wage income (allowing for taxes on production).

MODELLING THE TOTAL ECONOMIC CONTRIBUTION

Broadly speaking, input-output multipliers measure the relationship between an initial impact (such as spending) and final outcomes across the whole of the economy in terms of gross output, GDP and employment.

This study uses "Type II" multipliers. Type II multipliers allow for both the "indirect" supply chain effects (i.e., the film and TV industries purchasing from other industries) and "induced" effects, which arise from workers spending wages (from direct and indirect employment) on goods and services. (Studies which only allow for the indirect or supply chain effects use what is known as Type I multipliers. Type II multipliers will be larger than Type I multipliers.)

In order to estimate the indirect and induced contributions, we develop a model based on the official 139-sector China input-output (IO) table for the year 2012 (the most recent detailed tables available).⁶² An IO table details economy-wide transactions between sectors

in matrix form, quantifying the extent to which different industries sell to and purchase from each other.

By appropriately manipulating the IO matrix, we are able to estimate the contribution of, for example, film production on the rest of the economy through its supply-chain purchases (indirect effect) and through the spending of those employed directly and indirectly in film production (induced effect).

The "Radio, television, film and video recordings" sector within the Chinese IO tables is the closest match to the film and TV industries which are the focus of this study. Accordingly, the multipliers for this sector are the basis for the indirect and induced effects in the study.

We then applied the value of purchases from direct activities (supply chain effects) and wage income from direct and indirect activities (consumption effects) to our IO model. This allows the estimation of indirect and induced effects in the rest of the economy.

ADJUSTMENTS FOR LEAKAGE AND DOUBLE COUNTING

Generally, when domestic demand expands there will also be an increase in the demand for imports. For example, if consumers spend money on the film and TV industry some of this spending will flow out of the country (e.g., due to the payment of film royalties or the purchase of imported materials by production companies). This is formally known as "leakage". Allowing for leakage is important as otherwise the indirect and induced effects will be overestimated.

The standard format of the Chinese IO tables does not allow for the direct estimation of such leakage on a disaggregated industry by industry basis. Accordingly, the tables are adjusted to allow for such leakage using industry imports data, derived from the "imported goods and services" worksheet of the Chinese IO tables.

The Type II multipliers used in this study are also (downwardly) adjusted to reflect the fact that, in any given year, if employees currently working for the film and TV industries were *not*

⁶² Source: 'Input-Output Tables of China', National Bureau of Statistics of China (2015).

employed then they would still spend money on goods and services by drawing on alternative sources of income or from savings. In China unemployment benefits are limited. The major source of funds for the unemployed is likely to be in the form of individuals' savings. We have therefore adjusted down the Type II multiplier by using the savings rate to account for the spending that would still happen in the event of unemployment.

Downward adjustments to the multiplier contributions would also need to be made to avoid double-counting of output. This is because, in some cases, part of a particular industry's supply chain includes sub-sectors that have already been classified as part of the (direct) film, video and television market. For example, film exhibitors purchase goods and services from film distributors (e.g., film prints and the rights to show the film), so film distribution forms part of the supply-chain or indirect effects of film exhibition. However, film distribution activity is already included as part of the direct effects of the film and television industries.

This double-counting would be captured as a sub-set of the "own-industry" purchases of the 'Radio, TV, Film and Video' IO sector (the IO sector chosen to represent the multipliers in this study). In our example the exhibitor purchases from film distributors would be captured within this 'own-industry' figure. We therefore set the own-industry purchases to be zero to avoid the double-counting issue and lower the multipliers. Note that this is likely to be an over-compensation for the double-counting effect, as the adjustment would also exclude legitimate (i.e., non-double-counting) purchases which should be captured within the multiplier; for example radio services purchased by the film industry. Therefore, the multiplier effects reported in this study may be considered conservative estimates.

ESTIMATING GDP, EMPLOYMENT AND EARNINGS

The gross output totals derived from the above modelling are converted into estimates for GDP using sectoral ratios of value added to gross output taken from the IO tables. These were then converted into employment estimates using economy average productivity (measured in terms of GDP per worker) for 2017.⁶³

This process is repeated for each sub-sector to generate separate estimates for the total GDP and employment contribution, consisting of direct, indirect and induced effects. From this one can then calculate the implied GDP and employment multipliers.

Fig. 25: Derivation of gross output multipliers for the film and television industries

Sub-sector	GDP Multiplier	Employment Multiplier
Free-to-Air TV	2.3	4.0
Cable TV	2.3	4.0
Other TV Services	2.3	4.0
IPTV	2.3	4.0
Total TV	2.3	4.0
Over-The-Top	2.3	4.0
Film Exhibition	2.4	2.3
Film Production and Distribution	2.2	2.7
Physical Home Entertainment	2.4	3.1
Total Film	2.3	2.4
Total	2.3	3.7

⁶³ Source: National Bureau of Statistics of China.

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The modelling and results presented here are based on information provided by third parties, upon which Oxford Economics has relied in producing its report and forecasts in good faith. Any subsequent revision or update of those data will affect the assessments and projections shown. To discuss the report further please contact:

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