

THE ECONOMIC CONTRIBUTION OF FILM AND TELEVISION IN CHINA IN 2016



TABLE OF CONTENTS

1. Key Findings	4
2. Film Industry	8
2.1 Film production and distribution	8
2.2 Film Exhibition	8
2.3 Home Entertainment	9
2.4 Trends over time	9
3. Television Industry	10
3.1 Free-to-air Television	10
3.2 Cable Television	10
3.3 Other Television Services	11
3.4 IPTV	11
3.5 Over-The-Top (OTT)	12
4. Additional Impacts	13
4.1 Exports	13
4.2 Film Festivals	13
5. Tourism	14
6. Emerging issues	16
6.1 City Level film exhibition Market	16
6.2 OTT market	19
6.3 Mini theatre market	20
7. Methodology	22

1. KEY FINDINGS

China's film and TV industry made a significant contribution to the economy in 2016...

Film and TV made a total direct contribution to Chinese GDP of 254 billion yuan in 2016 (Fig. 1). This represented 0.34% of the Chinese economy.¹

The largest component of this comes from the TV industry, with a direct contribution to Chinese GDP worth 224 billion yuan, 88% of the total of the film and television industry². Of this, the largest component is Free-to-Air (FTA) TV, which made a direct contribution to GDP worth 79 billion yuan in 2016. A further 47 billion yuan was generated through Cable TV, and 66 billion yuan through a range of other TV services.

The TV industry also includes a range of online offerings, such as IPTV and over-the-top (OTT) content. IPTV directly generated a contribution to Chinese GDP worth 22 billion yuan in 2016, with OTT content generating a further 10 billion yuan.

The film industry directly contributed 30 billion yuan. Film exhibition contributed 17 billion yuan, alongside 13 billion yuan from film production and distribution and 0.2 billion yuan from physical home entertainment.

... this activity directly supported 1.1 million jobs in China in 2016...

The TV industry directly employed 865,000 people in 2016. The largest share again came from FTA TV, employing 305,000 people. 180,000 were employed in Cable TV and 256,000 employed in a range of other TV services. 85,000 were employed in IPTV and 40,000 directly employed by OTT.

Fig. 1: Direct contribution of Chinese film and TV to domestic GDP, 2016

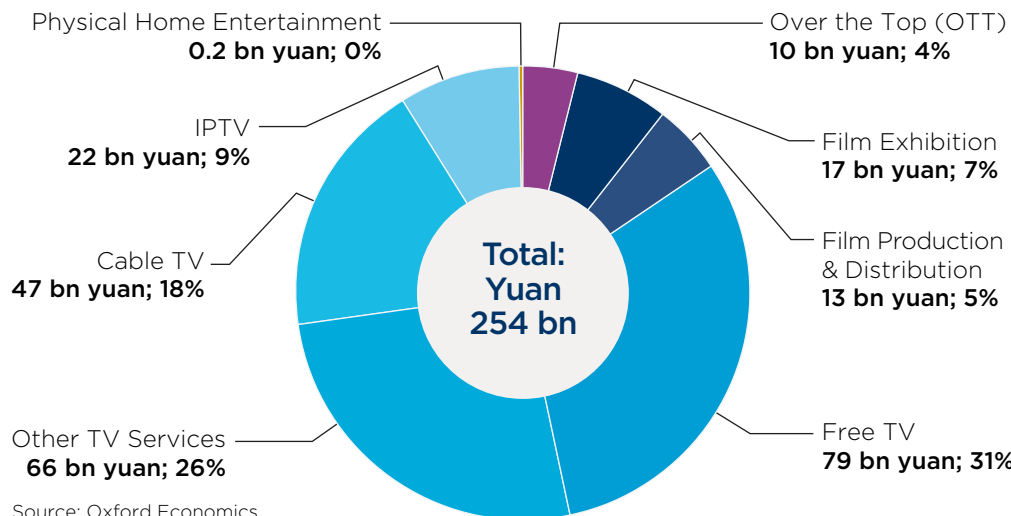
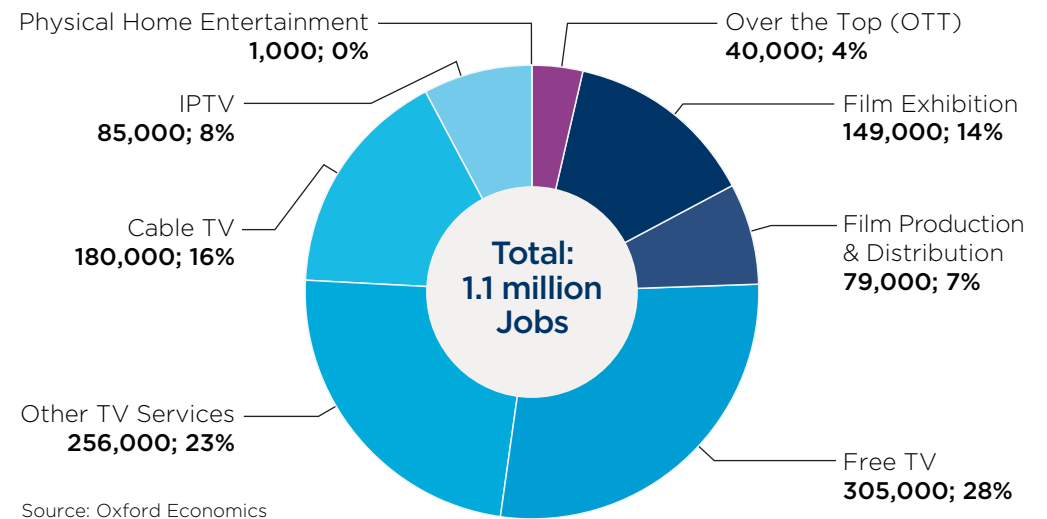


Fig. 2: Direct employment of Chinese film and TV, 2016



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.

Film directly sustained 229,000 jobs. Of these, 149,000 were in film exhibition, 79,000 were in film production and distribution, and a further 1,000 were in physical home entertainment.

This combined footprint amounts to 0.14% of the total employment in China in 2016

... with large tax contributions made...

The Chinese film and TV industry directly contributed a total of 48 billion yuan of tax revenues in China in 2016. This represented 0.16% of total tax revenues in the country.

TV was the main driver of this, responsible for 42 billion yuan in revenue, of which the largest share came from FTA TV (15 billion yuan), with Cable TV and other TV services also making sizeable contributions (8.7 and 12.4 billion yuan respectively). The film industry directly contributed 6 billion yuan in tax revenues, of which film exhibition was responsible for 3.3 billion yuan and film production and distribution 2.7 billion yuan.

... and a large amount of productivity achieved.

The average employee working in the Chinese film and television industry in 2016 made a direct contribution to GDP worth 232,000 yuan. The TV industry boasts an average productivity of 258,000 yuan per worker, compared to 131,000 yuan per worker in the film industry.

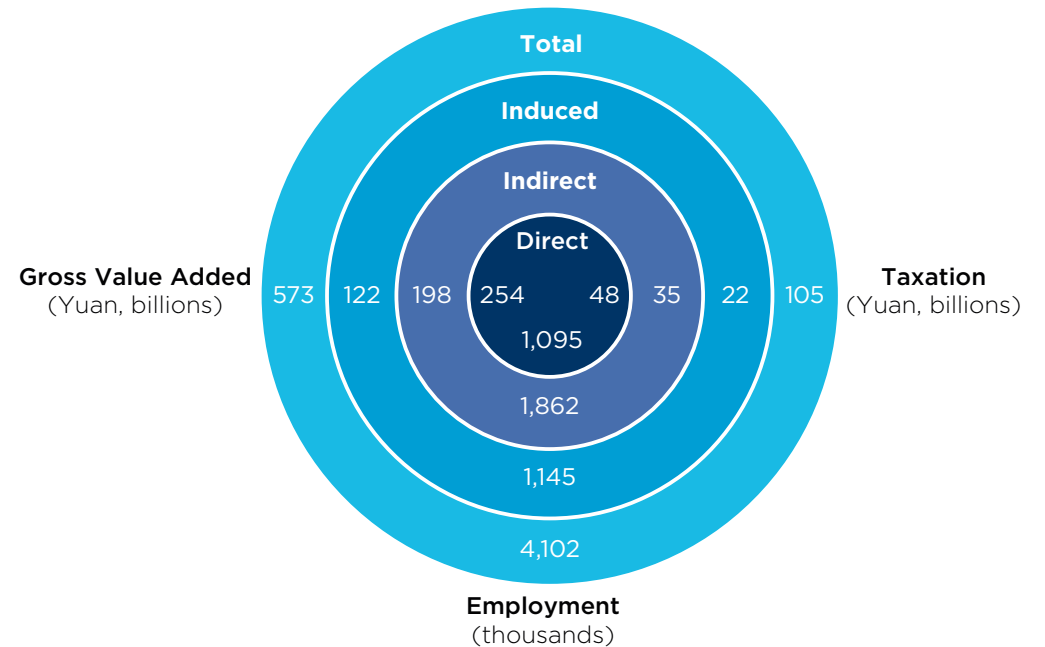
Across China as a whole, GDP per worker was 97,000 yuan in 2016. The average employee in the film and TV sector is therefore some 140% more productive than the Chinese average.

Significant multipliers effects deliver a significant total economic footprint.

In calculating the overall economic footprint, the domestic supply chain made by the industry (the indirect contribution) and the consumer spending that direct and indirect employees make out of their earnings (the induced effect) are taken into account.

The film and TV industry's supply chain produced an indirect contribution to GDP worth 198 billion yuan and an impact of induced consumption expenditure worth 122 billion yuan. Taken together with a direct contribution of 254 billion yuan, this means that the industry was responsible for a total economic footprint of 573 billion yuan. This represents a multiplier of 2.3, meaning that for each direct contribution of 10 billion yuan, a total contribution worth 23 billion yuan was made.

Fig. 3: Economic contribution of the Chinese film and TV industry, 2016



Through the indirect contribution, a total of 1.86 million jobs were supported, alongside 1.14 million through induced effects. Including 1.1 million direct jobs, the sector therefore supported a total of 4.10 million jobs, with an employment multiplier of 3.7.

Supported by a direct contribution of 48 billion yuan, an indirect contribution of 35 billion yuan and an induced contribution of 22 billion yuan, the total tax footprint stood at 105 billion yuan in 2016.

Fig. 4: Total economic contribution of film and TV industry and its components, 2016

	Gross Output (Yuan, billions)		GDP (Yuan, billions)		Employment (thousands)		Tax (Yuan, billions)	
	Direct	Total	Direct	Total	Direct	Total	Direct	Total
Free-to-Air TV	154.0	358.9	78.8	178.2	305	1,240	14.8	32.6
Cable TV	91.0	212.2	46.6	105.3	180	733	8.7	19.3
Other TV Services	129.3	301.4	66.1	149.6	256	1,041	12.4	27.4
IPTV	42.8	99.7	21.9	49.5	85	345	4.1	9.1
Over-The-Top	20.1	46.8	10.3	23.3	40	162	1.9	4.3
Total TV	437.1	1,019.1	223.6	505.9	865	3,522	42.0	92.5
Film Exhibition	33.2	78.6	16.5	38.4	149	355	3.3	7.3
Film Production and Distribution	24.5	55.2	13.3	28.4	79	222	2.7	5.4
Physical Home Entertainment	0.4	0.9	0.2	0.4	1	4	0.0	0.1
Total Film	58.1	134.7	30.0	67.2	229	580	6.0	12.7
Total	495.2	1,153.8	253.6	573.1	1,095	4,102	48.0	105.3

Numbers may not sum to totals due to rounding

HOW WE ARRIVED AT THESE FIGURES

Oxford Economics was commissioned by the 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 State Administration of Press, Publication, Radio, Film and Television in the 'Blue Book of China's Radio, Film and Television' ('the Blue Book'). The most recent version of this publication was released in 2017 and provides statistics relating to the 2016 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 7.

ADDITIONAL ECONOMIC CONTRIBUTIONS

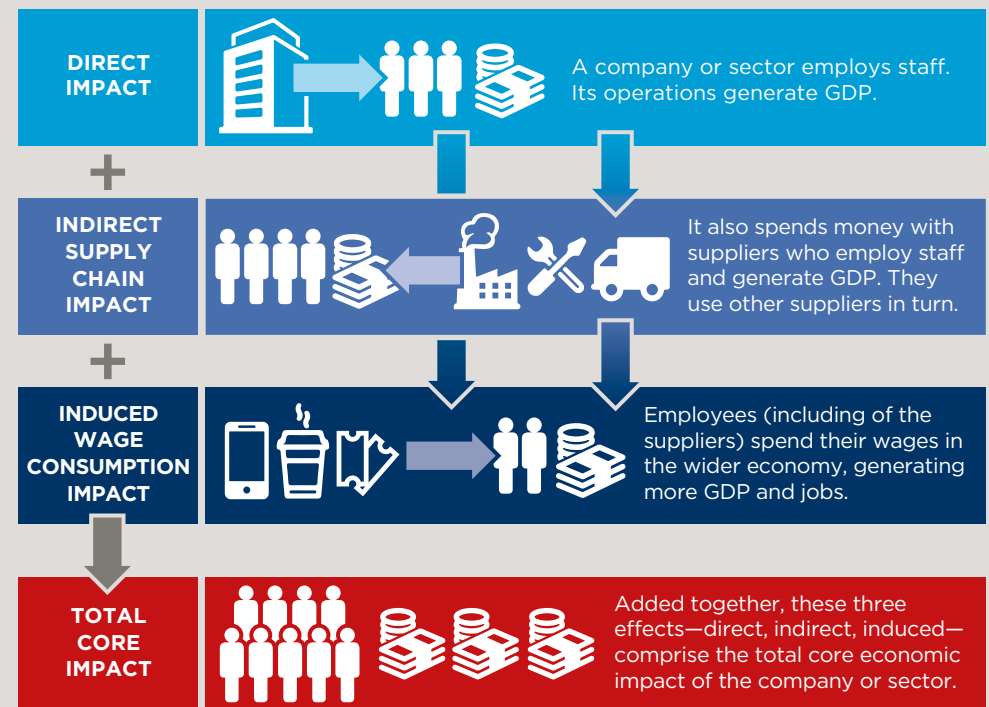
The **total economic contribution** of the film and television industries on the Chinese economy takes into account two further channels of economic contribution:

- **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. Further details are provided in Chapter 7.

Fig. 5: Illustration of economic impact framework



2. FILM INDUSTRY

This section details the economic contribution made by different sectors of the Chinese film industry. This includes the production and distribution of products in China, film exhibition and the domestic home entertainment industry.

2.1 FILM PRODUCTION AND DISTRIBUTION

The Chinese film industry was responsible for wholly producing a total of 772 films in 2016, or 944

including educational films and documentary titles. Domestic films accounted for 82% of domestic film releases and 58% of all Chinese box office revenues.³ This provides significant economic activity through domestic film production. The distribution of domestic and foreign films also generates significant value for the Chinese economy.

In total, film production and distribution contributed 28 billion yuan to Chinese GDP in 2016. Of this, 13.3 billion was generated directly,

9.2 billion yuan indirectly through its supply chain and a further 6.0 billion yuan through induced consumer spending. Total tax revenues totalled 5.4 billion yuan - half of this (2.7 billion yuan) being from the direct activities of film producers and distributors.

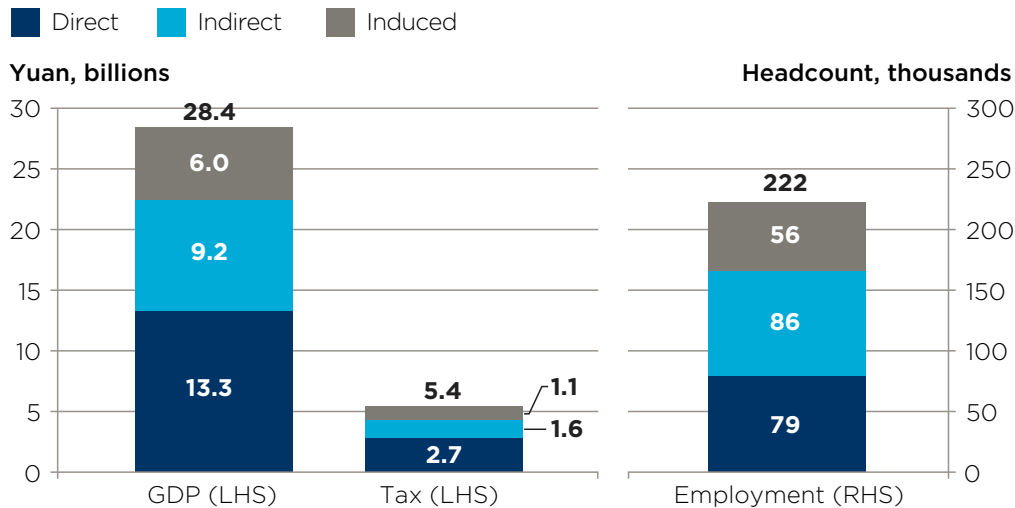
A total of 222,000 jobs were supported by film production and distribution in 2016. Of these, 79,000 came from the direct activities of firms in the sector, 86,000 from their supply chains, and 56,000 through induced consumer spending.

2.2 FILM EXHIBITION

Chinese cinema attendance reached 1.4 billion in 2016, with total box office revenues of 49.3 billion yuan. This represents rapid growth, detailed more fully later in this chapter, and means the industry supports a large contribution to the domestic economy.

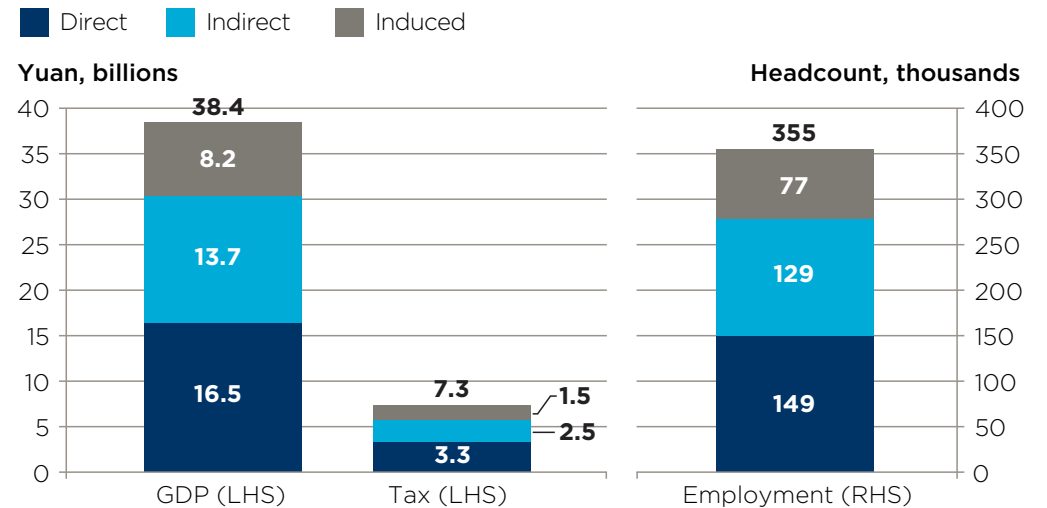
The total footprint of film exhibition made a contribution to Chinese GDP worth 38.4 billion yuan in 2016. The direct contribution to GDP stood at

Fig. 6: Economic contribution of film production and distribution in 2016



Source: Oxford Economics

Fig. 7: Economic contribution of film exhibition in 2016



Source: Oxford Economics

³ A more detailed description of the way that the domestic film industry has evolved is given later in this chapter.

16.5 billion yuan, with 13.7 billion yuan generated indirectly and 8.2 billion through induced effects. Tax revenues worth 7.3 billion yuan were made, with the largest share, 3.3 billion yuan, coming through direct effects.

Employment in the sector totalled 355,000. Of this, 149,000 came from the direct contribution, 129,000 indirectly and 77,000 through induced effects.

2.3 HOME ENTERTAINMENT

On top of the significant consumption of films through cinemas, there is still demand for physical home entertainment. This encompasses the purchase of video products made by Chinese consumers, with 23 million DVDs and 0.3 million Blu-ray disks sold to Chinese consumers in 2016. Total revenues from sales stood at 373.9 million yuan, a decrease of approximately a quarter from 2015.

The total footprint of physical home entertainment in the Chinese economy amounted to a 439 million contribution to GDP in 2016. Of this,

183 million was made through the direct effect, 156 million indirectly and 100 million through the induced contribution. A total tax contribution of 88 million was made through home entertainment.

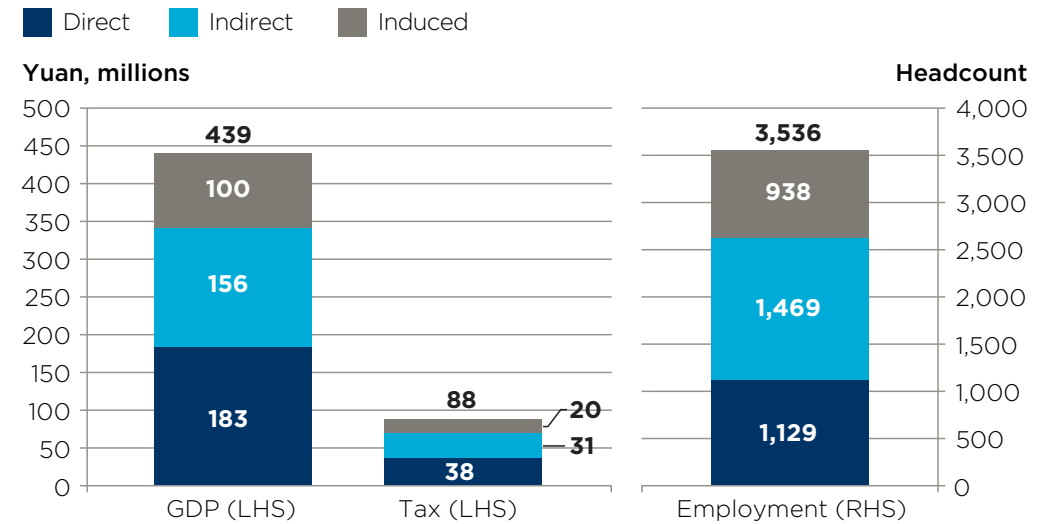
A total of 3,536 jobs were supported by the home entertainment industry in 2016, with the largest share of these, 1,469, supported through the sector's supply chain.

2.4 TRENDS OVER TIME

The Chinese film industry has seen rapid expansion over recent years, driven by a growth in the number of consumers. The 1.4 billion total box office attendance that Chinese cinema enjoyed in 2016 represents a 600% increase since 2009 (Fig. 9) and positions the country as the world's second largest market for theatrical productions, after the United States.

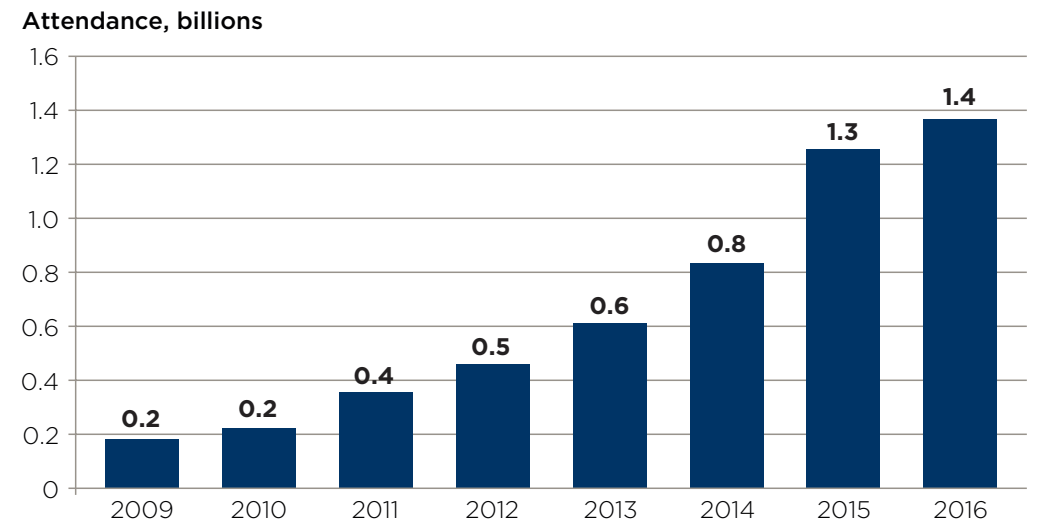
This growth has happened consistently, with every single year since 2009 experiencing growth. To put this in context, total private consumption has increased by 90% in real terms over this time.⁴

Fig. 8: Economic contribution of physical home entertainment in 2016



Source: Oxford Economics

Fig. 9: Total cinema attendance, 2009 to 2016



Source: Oxford Economics, National Bureau of Statistics of China

⁴ Source: China National Bureau of Statistics via Haver Analytics.

3. TELEVISION INDUSTRY

This section outlines the value generated by different components of the Chinese TV industry. The industry is driven by the broadcast of both Free-to-Air and Cable TV, a range of production and technical services, IPTV and Over-the-Top broadcasting.

3.1 FREE-TO-AIR TELEVISION

The largest component of the Chinese TV industry is Free-to-Air (FTA) television, which covers the production, distribution and

broadcast of television programmes to FTA channels. These channels do not charge viewers a fee, with the state broadcaster, CCTV (Chinese Central Television) being the dominant broadcaster.

FTA television supported 178.2 billion yuan contribution to GDP in 2016 in total, with 78.8 billion coming directly, and indirect and induced contributions of 61.6 billion yuan and 37.8 billion yuan respectively. This activity supported 32.6 billion yuan in tax revenues, 14.8 billion yuan of this coming directly.

A total of 1.24 million people were employed through FTA television services in 2016. Of these, 305,000 were directly employed, with indirect effects supporting 580,000 and induced effects supporting 356,000.

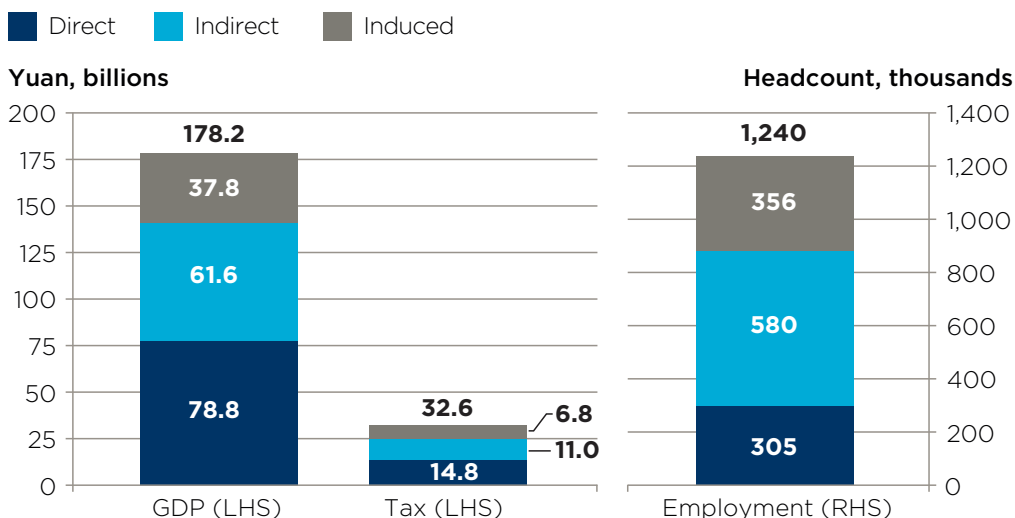
3.2 CABLE TELEVISION

There were an estimated 228 million Cable television users in China in 2016. The total number of subscribers has been quite stable over recent years, however the nature of subscription has evolved,

with 88% of users in 2016 being digital subscribers, an increase from 57% in 2011. The number of paid digital subscribers has more than trebled from 18 million to 58 million over this period of time. This change has been reflected in robust revenue growth, from 56 billion yuan in 2011 to 91 billion yuan in 2016.

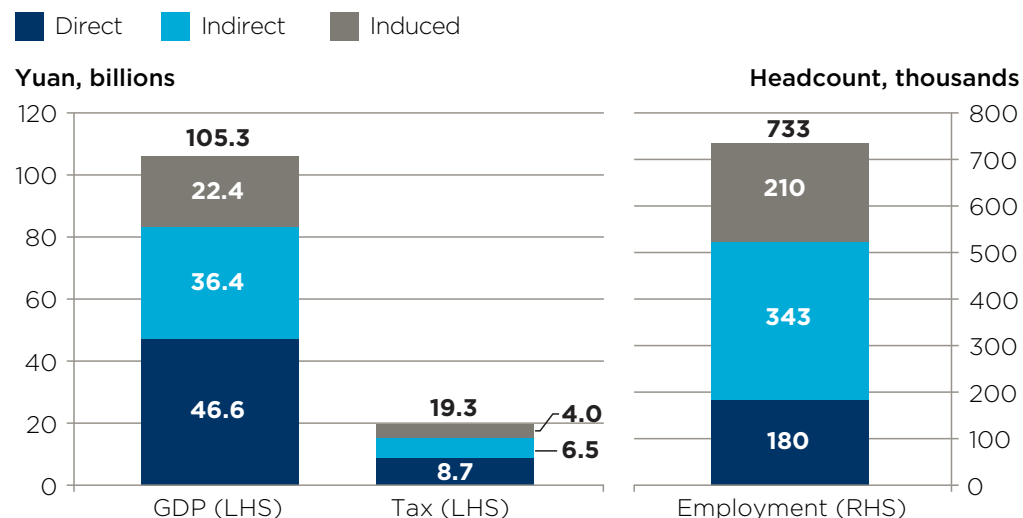
Cable TV made a total contribution of 105.3 billion yuan to Chinese GDP in 2016. Of this, 46.6 billion was made directly by Cable TV companies, with 36.4 billion yuan

Fig. 10: Economic contribution of free-to-air TV in 2016



Source: Oxford Economics

Fig. 11: Economic contribution of Cable TV in 2016



Source: Oxford Economics

made indirectly and a further 22 billion through the induced effect. This activity supported a total of 19.3 billion yuan in tax revenues, of which 8.7 billion yuan was generated directly.

Cable TV supported an estimated 733,000 jobs in 2016, with 180,000 of these being generated directly, 343,000 indirectly and 210,000 induced through consumer spending.

3.3 OTHER TELEVISION SERVICES

Alongside the range of economic activity generated through FTA and cable TV, we include the activities of a range of ancillary services associated with television, including television production and technical services.

The sector made a total contribution to domestic GDP of 149.6 billion yuan in 2016. Of this, 66.1 billion yuan was made directly, with 51.7 billion yuan made through

its supply chain and 31.8 billion yuan made through the induced effect. FTA television supported a total of 27 billion in tax revenues, the largest share of which (12.4 billion yuan) came through the direct channel.

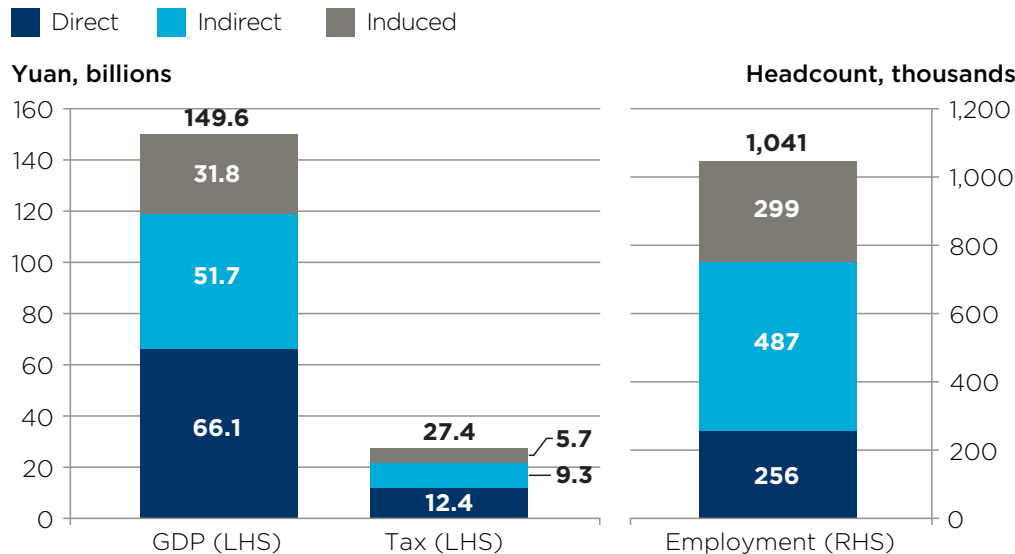
3.4 IPTV

Internet Protocol Television (IPTV) involves the transmission of traditional TV content over the internet. The number of subscribers

is estimated to have risen rapidly from 10 million in 2014 to 60 million in 2016.⁵ This generated revenue of 42.7 billion yuan in 2016, meaning that it represented a sizeable component of the combined TV industry⁶.

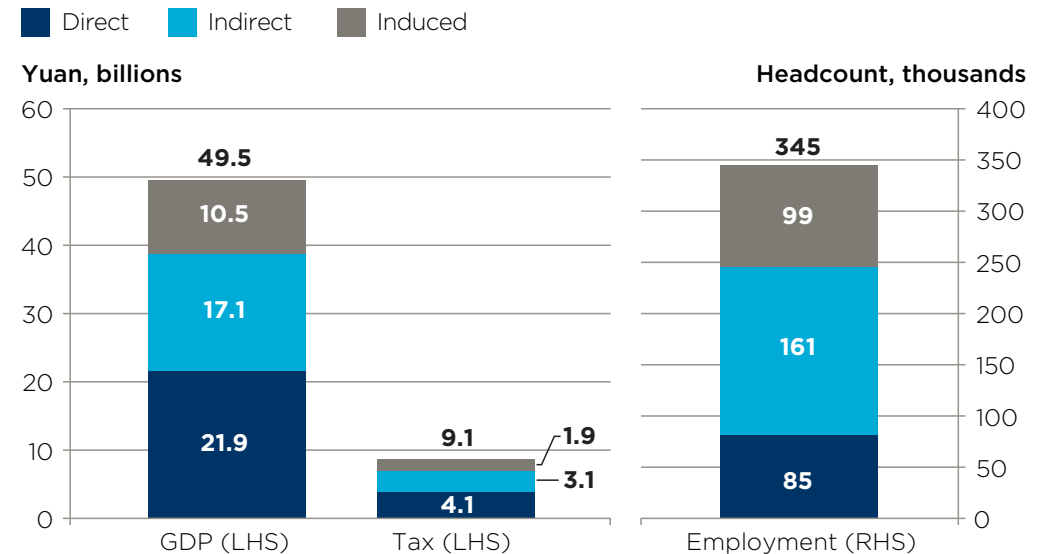
Altogether IPTV supported a total of 49.5 billion yuan in economic activity, of which 21.9 billion yuan was generated directly, 17.1 billion yuan indirectly and 10.5 billion yuan in the induced contributions.

Fig. 12: Economic contribution of other TV services in 2016



Source: Oxford Economics

Fig. 13: Economic contribution of IPTV in 2016



Source: Oxford Economics

⁵ National Bureau of Statistics in China, "Annual Report on Development of China's Audio-Visual New Media" (Blue Book, 2017).

⁶ Source: IHS/Screen Digest

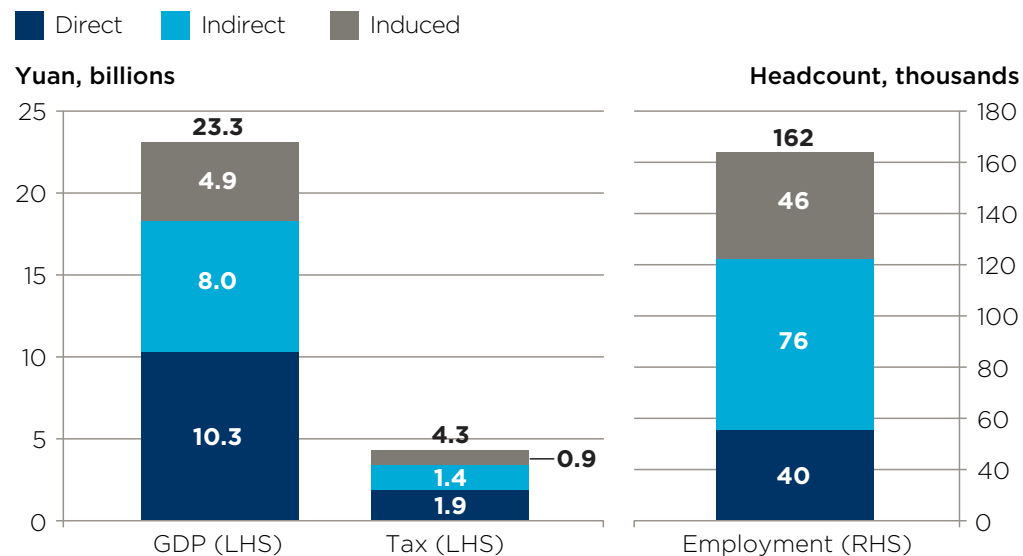
This supported tax contributions worth 9.1 billion yuan, 4.1 billion yuan coming directly. IPTV supported the employment of 345,000 people in total: 85,000 directly, 161,000 through indirect effects and 99,000 through induced effects.

3.5 OVER-THE-TOP (OTT)

Another emerging source of online TV distribution is Over-the-Top (OTT) which covers content that is distributed through the internet by non-conventional distributors, separate from existing media channels.

OTT made a total contribution of 23.3 billion yuan to Chinese GDP in 2016. Of this, 10.3 billion yuan was contributed directly, with 8.0 billion yuan indirectly and 4.9 billion through induced effects. Tax contributions are estimated to have been worth 4.3 billion yuan, with 1.9 billion yuan generated directly. OTT television sustained a total of 162,000 jobs in 2016, with 40,000 being supported directly, 76,000 indirectly and 46,000 through induced consumer spending.

Fig. 14: Economic contribution of OTT in 2016



Source: Oxford Economics

4. ADDITIONAL IMPACTS

4.1 EXPORTS

In 2016, the Chinese film industry was responsible for a total of 3.82 billion yuan worth of exports. The TV industry made exports totalling 560 million yuan, meaning that the combined industry was responsible for 4.38 billion yuan of exports. Nonetheless, its share of total exports remains small: the industry was responsible for only 0.03% of total Chinese exports in 2016.⁷ Events such as film festivals (below) and China's growing international prominence may help boost Chinese film exports over time.

4.2 FILM FESTIVALS

China's position as a home for international cinema can be seen in the size of the film festivals that it has hosted in recent years. In 2016, the Beijing International Film Festival had 2,329 exhibitions from 105 countries, whilst the Shanghai International Film Festival hosted 2,403 exhibitions from 114 countries.

This presence makes China a key location for the promotion of international films from a wide range of countries, creating opportunities for the domestic film market to develop further and relationships to be built. Furthermore, they help boost the appreciation of international films within China, potentially supporting the appreciation of different productions within the country.

Fig. 15: Major international film festivals in China in 2016

	Number of exhibitors	Number of participating countries
Beijing International Film Festival	2,329	105
Shanghai International Film Festival	2,403	114
Silk Road International Film Festival	242	35

⁷ The film industry figure is based on data from the State Administration of Press, Publication, Radio, Film and Television; television export estimates are sourced from the *China Statistical Yearbook 2016*.

5. 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, though the sub-industry is still rather nascent and growing quickly. Many shooting locations for film and TV programs are now famous tourist destinations in China⁸.

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:

- 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 agents involved in the industry.

Through interviewing these agents, the ability of this mythology to provide an enduring draw to tourists is illustrated.⁹

- 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.¹⁰
- In a study into the CCTV series *Story of Liu Laogen*, Wu and Hou (2006) conducted survey work, identifying that three-quarters of tourists came to the village in order to see the home of the titular character.¹¹
- 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% of visitors surveyed

in 2007 reported that the works and films were an influence in their choice. Out of all the respondents, 50% wanted to have an experience connected to TV and film, with 22% wanting to see specific filming locations.¹²

- 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.¹³
- Xu and Reijnders (2017) find that Hengdian World Studios encourages domestic tourism and relocation to experience the filming and to work, though this study primarily focuses on 'extras' in films.¹⁴

⁸ Jinmei, W, 'Analysis and strategic suggestions for China's film and TV tourism', *Green Book of China's Tourism*, (2013), p. 185

⁹ G Huang, "Mediating Tourist Landscape: A Case Study of Media-Induced Tourism in China", *International Journal of Communication*, 7 (2013): 2678-96.

¹⁰ 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.

¹¹ Wu, L, Hou, X (2006), 'A Study on the Motivation of Movie-induced Tourists - A Case Study of Tourism in Longquan Villa of Tieling' *Human Geography*, Vol. 21, No.2.

¹² 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.

¹³ 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.

¹⁴ 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.

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.¹⁵

Likewise, Liu suggests that the way forward for northeast tourism is to follow in the footsteps of successful examples such as Guilin and Liuzhou and to ensure that local themes are emphasised in film and TV productions. One example is emphasising the themes of snow and ice culture in productions featuring Heilongjiang, or emphasising the area's folkloric traditions.

In the media, visitation and income flows have been attributed to specific film and TV destinations, with varied supporting revenue evidence. Examples of film and TV 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. Specific examples of recent tourism revenues for some of these destinations include:¹⁶

- *Hengdian*: Hengdian Television City's financial report recorded revenues of 1.94 billion yuan for the calendar year up to 30 September 2017, though it is not clear how much was specifically tourism-related.¹⁷

- *Xiangshan Film City*: Xiangshan Movie and TV City Development Co., Ltd. reported an operating income of 72.83 million yuan for the year up to mid-October 2016, driven by 1.63 million tourist trips.¹⁸
- *Changchun Century City movie theme park*: The annual revenue of this facility has been reported as 80 million yuan.¹⁹
- *China Film Huairou Production Base*: Although specific destination revenue figures were not available, the Huairou District Propaganda Department Network Information Office stated that the Huairou district convention and exhibition industry – of which film and television exhibitions are a part – contributed tourism revenues of 300 million yuan in 2016.²⁰

The overall conclusion is that there appears to be significant development potential for domestic film and TV tourism. Film and TV destinations are starting to generate substantial revenues.

However, it 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.

¹⁵ 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)

¹⁶ While this report focusses on 2016, some of these data relate to 2017. The aim here is to provide the most recent tourism data available.

¹⁷ *Sina*, 'Hengdian Television (603103) Project: Financial Summary', http://vip.stock.finance.sina.com.cn/corp/go.php/vFD_FinanceSummary/stockid/603103/displaytype/4.phtml, accessed 30 November 2017

¹⁸ *Xiangshan Movie and TV City Development Co., Ltd.*, 'Xiangshan film city to celebrate the 10 million tourists', <http://www.xsysc.com/news/show/351.html> accessed 30 November 2017

¹⁹ *Academic Hall Category*, 'Century City procurement process problems', http://www.lunwenstudy.com/mba/mbaqygl/128908_2.html accessed 30 November 2017

²⁰ *Sina*, 'Huairou District, Beijing Convention and Exhibition economy income 300 million', <http://city.sina.com.cn/city/t/2017-05-08/155259456.html>, accessed 30 November 2017

6. EMERGING ISSUES

6.1 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'.²¹ 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).²² 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 likewise announced a target of 400 new venues by 2018, focussing on Tier 3 and smaller cities.²³ At the same time, the gradual rise of incomes in such cities may also make cinema going more affordable.

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 2016, this figure had risen to 38 percent. While box office revenues in Tier 1 and 2 cities grew by 149 percent between 2010 and 2016, receipts in Tier 3-5 cities grew by 280 percent.²⁴ 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.²⁵ The pace of cinema construction in such cities may also obviously be a factor.

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.²⁶ This may be due to factors such as the popularity of major releases, seasonal release changes and a rapidly changing entertainment market within China.

²¹ The Tier system is not strictly official but is often used as a convenient way to sub-divide the Chinese market.

²² 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. Tier 1 cities are generally defined as Beijing, Shanghai, Tianjin, Chongqing, and Guangzhou. 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. For a guide to Tier city classifications see *South China Morning Post*, 'China's tiered city explained' <http://multimedia.scmp.com/2016/cities/> accessed 10 November 2017

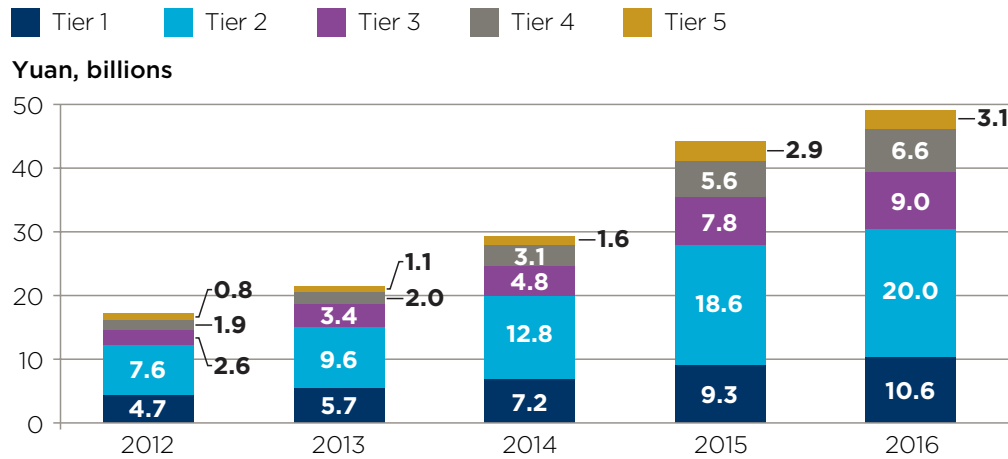
²³ *South China Morning Post*, 'Dadi Cinema expands in smaller Chinese cities to tap stronger growth in movie ticket sales', 19 June 2017 <http://www.scmp.com/business/companies/article/2098852/dadi-cinema-expands-smaller-chinese-cities-tap-stronger-growth>, accessed 10 November 2017, and Artisan Gateway, *AG China Cinema Trends*, September 2017

²⁴ China Film Yearbook Press, *2016 Chinese Film Market Review*, 2017 and Macquarie Research, *Global Movie and Cinema*, 2017

²⁵ *South China Morning Post*, *Dadi*, *op. cit.*

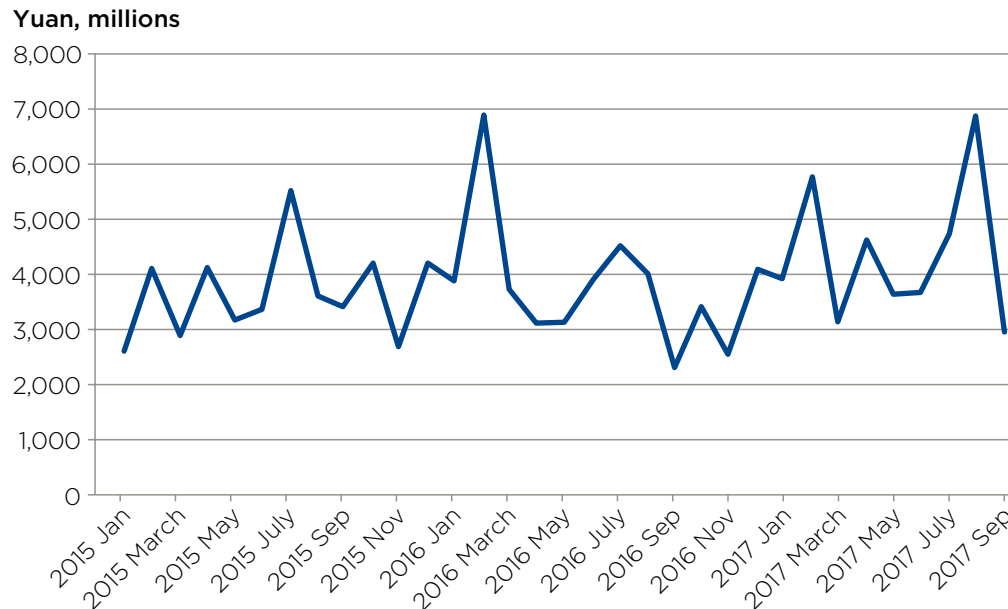
²⁶ Monthly data sourced through Entgroup, 'China Box Office' <http://www.cbooo.cn/monthday> accessed 21 November 2017. Though the focus of this report is on 2016, it is instructive to compare trends across the range of available data from January 2015 to September 2017.

Fig. 16: Chinese box office revenue by city tier



Source: Macquarie Research; Oxford Economics

Fig. 17: Chinese total monthly box office revenue (million Yuan)



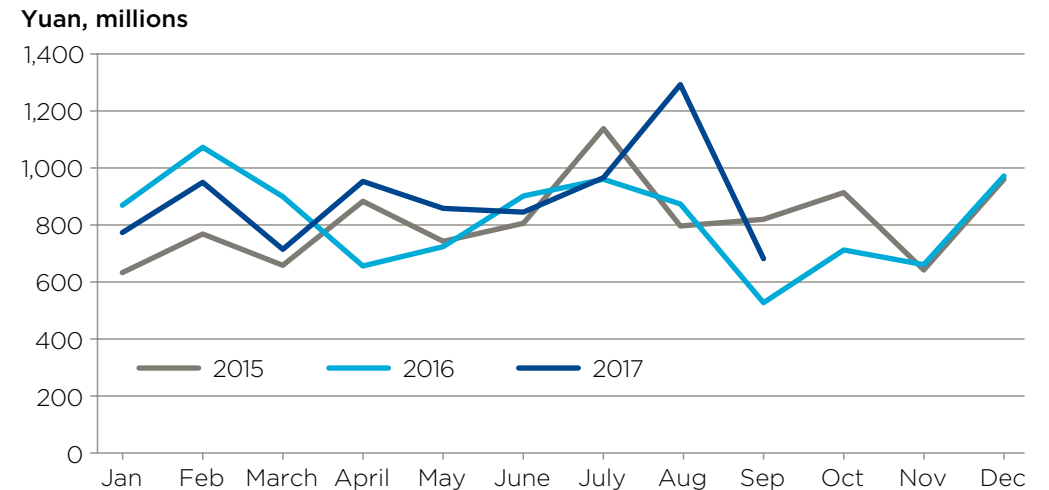
Source: Entgroup

A breakdown of this revenue data by city Tier is also available.²⁷ Any conclusions must be tentative due to the changes noted above. However, it is interesting to see that Tier 3-5 cities may exhibit more pronounced peaks in 2016 and 2017 than Tier 1-2 cities.²⁸ 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. A similar pattern was observed in February 2016, with 17-18 percent

of annual box office revenue earned in February in Tier 4 and 5 cities but only 12 percent earned in that month in Tier 1 cities.

It is difficult to be certain about why this is the case. It may be that the lack of alternative entertainment venues and the recent appearance of newly constructed cinema infrastructure is a factor in Tier 4 and 5 cities, though there appear to be no major differences between city Tiers in the July/August holiday period.

Fig. 18: Tier 1 city box office monthly revenue: 2015-2017

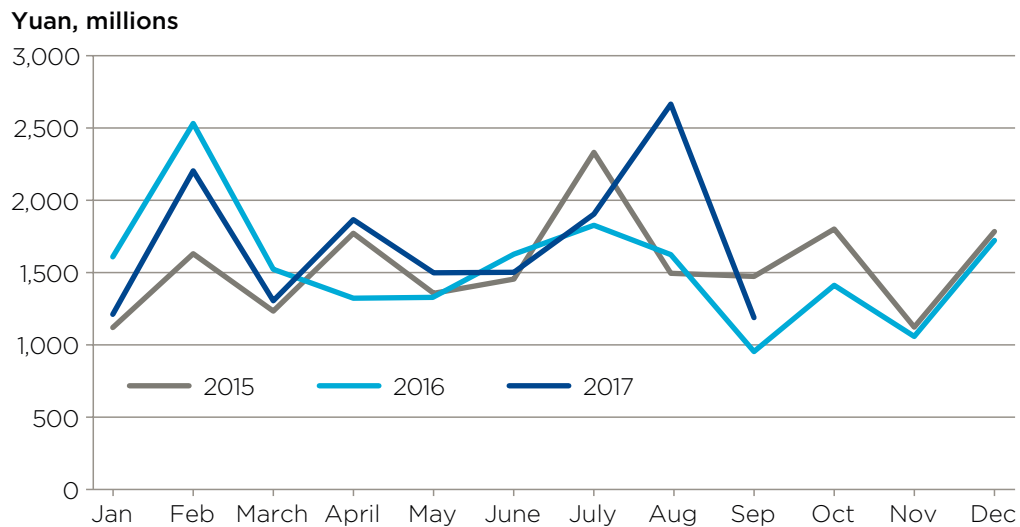


Source: Entgroup

²⁷ Entgroup, *op. cit.*

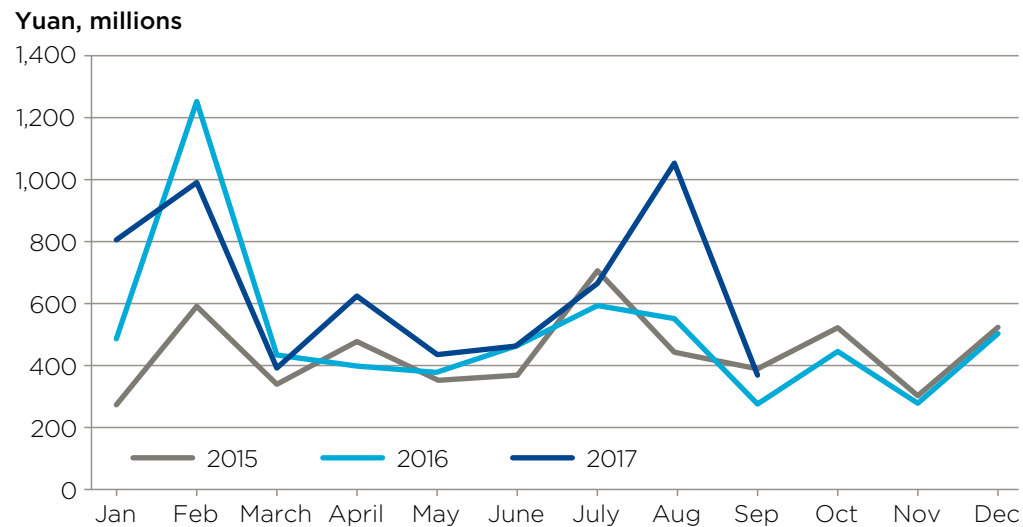
²⁸ This did not appear to be the case in 2015, though the reasons are unclear. Given the rapid rate of cinema construction in China it may be that fewer cinemas were available in lower Tier cities in that year than in subsequent years (i.e. supply side constraints).

Fig. 19: Tier 2 city box office monthly revenue: 2015-2017



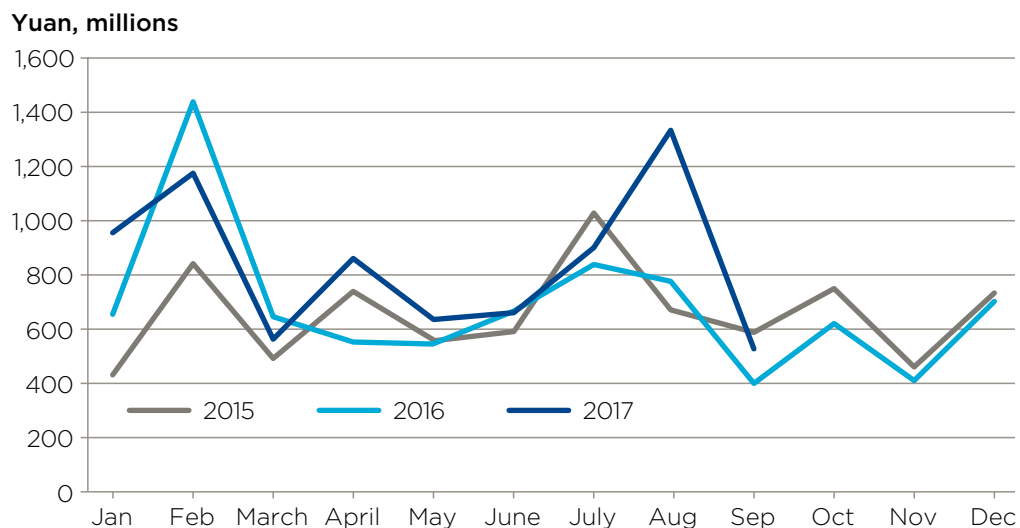
Source: Entgroup

Fig. 21: Tier 4 city box office monthly revenue: 2015-2017



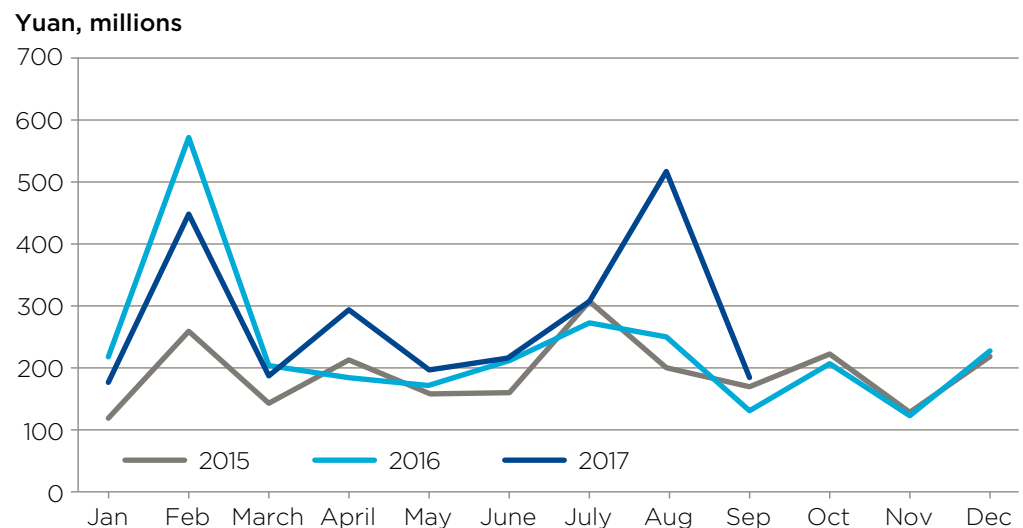
Source: Entgroup

Fig. 20: Tier 3 city box office monthly revenue: 2015-2017



Source: Entgroup

Fig. 22: Tier 5 city box office monthly revenue: 2015-2017



Source: Entgroup

6.2 OTT 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, a TV industry consultancy indicates that Smartphone subscribers grew from 47 million in 2010 to 941 million in 2016. Tablet subscribers grew from 1 million to 111 million during the same period.²⁹

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

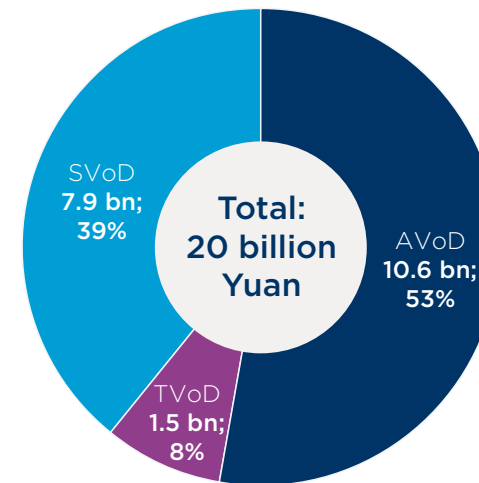
Video on Demand (TVoD). As its name suggests, AVoD refers to streaming services supported by advertising revenues while SVoD refers to services which require users to pay a regular subscription fee. TVoD refers to one-off purchases such as movie rentals and purchases.

Total revenue across all platforms was 191 million Yuan in 2010, of which approximately 108 million was AVoD, 66 million SVoD and 17 million TVoD. This compares to 20 billion Yuan in revenues across all platforms in 2016.³⁰

Most OTT viewing takes place through mobile platforms. Of the estimated 746 million OTT users in 2016 (compared to 25 million in 2010). 588 million (or 63 percent) accessed content through Smartphones, with the remainder using fixed broadband connections.³¹

Fig. 23: OTT revenue split: 2016

Yuan, billions; % share



As indicated, AVoD accounts for the majority of OTT revenues, though there have been determined efforts to encourage people into SVoD in order to boost profitability in the face of fierce competition. There appears to have been some progress

on this score, with some estimates suggesting 10 percent of users were paying SVoD subscribers by 2016. The abundance and product differentiation of the sites may also have helped to curb piracy to some degree.³² Sport in particular appears to be an important drawcard for SVoD.³³ There have been fears about SVoD cannibalisation of Cable TV revenues. However, though growing rapidly, the market remains small: the data above imply that SVoD revenues equated to some 9 percent of Cable TV revenues in 2016.

The biggest SVoD providers include YouKu Tudou (31 percent of SVoD revenues), iQiyi (34 percent) and Tencent Video (20 percent).³⁴ OTT is also spurring on the production of internet-only films, with 2,500 released in China in 2016. A sign of the sectors strength is that iQiyi is also venturing into film production, with forthcoming action movie collaboration with Sony Pictures.³⁵

²⁹ Based on data supplied through Digital TV Research

³⁰ *Ibid*

³¹ *Ibid*

³² *Technode.com* 'China's Online Video Market in the Middle of Transition to Paid Subscribers, Self-Produced Content' <http://technode.com/2016/12/12/chinas-online-video-market-in-the-middle-of-transition-to-paid-subscribers-self-produced-content/> accessed 21 November 2017; *Technode.com*, 'The Dilemma of Chinese Online Video Sites' <http://technode.com/2016/09/04/the-dilemma-of-chinese-online-video-sites/> accessed 21 November 2017

³³ *Videomind*, 'Chinas SVOD market to surpass 1.2 billion by 2016 as sports take centre stage' <http://www.ooyala.com/videomind/blog/china-svod-market-surpass-12b-2016-sports-take-center-stage>, accessed 21 November 2017.

³⁴ Based on data supplied through Digital TV Research

³⁵ *China Daily*, 'China's Online Film Industry, New Prospect on Smaller Screens' http://www.chinadaily.com.cn/business/2017-03/31/content_28751766.htm accessed 21 November 2017

6.3 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.³⁶

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 estimates suggest that there are over 10,000 mini theatres in China.³⁷

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.³⁸

In addition mini theatres have begun to diversify their core business into areas such as table games, chess, coffee shops, photography, and other services.

Though no official data appear to be available, a brief examination of selected major Tier 1-4 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.³⁹ The popularity of mini theatres outside Tier 1 cities may reflect differences in relative levels of affluence or other social factors.

³⁶ Mtime Network ‘Official introduction of “notice” strict control of private cinema’ <http://news.mtime.com/2017/05/24/1569547.html> accessed 21 November 2017

³⁷ *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

³⁸ *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

³⁹ Based on a comparison of 59 major Tier 1-4 Chinese cities within China’s four main regions using *Public Comment Network* <http://www.dianping.com/citylistguonei> accessed 21 November 2017



7. 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 is based on information produced in the 'Blue Book of China's Radio, Film and Television' (the Blue Book), compiled by the State Administration of Press, Publication, Radio, Film and Television (SAPPRFT). The most recent version of this document is the 2017 report, which contains data referring to the 2016 calendar year.

The Blue Book details the total revenue (or Gross Output) of the television and film industry's main components. IPTV and physical home entertainment revenues were sourced from Screen Digest data, produced by IHS. OTT revenues were established based on data purchased from Digital TV Research. The GVA contributions of most sectors were derived from the Gross 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 IHS Screen Digest data.

The study assumes producers and distributors combined received 43% of film (box office) revenues in 2016 for Chinese produced films. This split is reported by a number of publicly available articles and reports citing industry sources. Foreign producers have received a 25 percent share of the box office takings from imported 'revenue-sharing' films since 2012. Given a

43 percent split of the box office for producers and distributors combined, this implies Chinese distributors retain 18 percent of receipts from foreign films and we have employed this assumption in the modelling.

With respect to co-productions, in line with domestic and imported films, the study assumes 43 percent of revenues go to producers and distributors. The modelling then allocates half of this to foreign producers and half to domestic producers/distributors. This is due to the absence of actual data on revenue sharing arrangements for co-productions in 2016. (Presumably the foreign/domestic split will depend on the relative contributions of foreign and domestic companies to production and distribution costs.)

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 taken away.

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 in countries in a similar level of development, as well as being geographically close.

Productivity 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.

Film exhibition (box office) revenues are assumed to have a sales tax and VAT to a combined 8%. This is based on a number of articles detailing how box office revenues are split. The revenue from this taxation is attributed to film exhibition and production & distribution according to their split of the non-tax part of box office revenues (i.e., the remaining 92%).

Wage income for television and film is derived from official data on earnings from 'Broadcasting, Movies, Televisions 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 use the official 139-sector China input-output (IO) table for the year 2012 (the most recent detailed tables available).⁴⁰ 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 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 and wage income from the direct activities to the IO tables. This allows for 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 China 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 China 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* 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

⁴⁰ Source: *Input-Output Tables of China*, National Bureau of Statistics of China, 2009.

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.

Fig. 24: Derivation of gross output multipliers for the film and television industries

	GDP Multiplier	Employment Multiplier
Free-to-Air TV	2.3	4.1
Cable TV	2.3	4.1
Other TV Services	2.3	4.1
IPTV	2.3	4.1
Over-The-Top	2.3	4.1
Total TV	2.3	4.1
Film Exhibition	2.3	2.4
Film Production and Distribution	2.1	2.8
Physical Home Entertainment	2.4	3.1
Total Film	2.2	2.5
Total	2.3	3.7

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 2014.⁴¹

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.

⁴¹ Source: National Bureau of Statistics of China.



Panasonic
Made in Japan

OXFORD ECONOMICS

Oxford Economics was founded in 1981 as a commercial venture with Oxford University's business college to provide economic forecasting and modelling to UK companies and financial institutions expanding abroad. Since then, we have become one of the world's foremost independent global advisory firms, providing reports, forecasts and analytical tools on 200 countries, 100 industrial sectors and over 3,000 cities. Our best-of-class global economic and industry models and analytical tools give us an unparalleled ability to forecast external market trends and assess their economic, social and business impact.

Headquartered in Oxford, England, with regional centres in London, New York, and Singapore, Oxford Economics has offices across the globe in Belfast, Chicago, Dubai, Miami, Milan, Paris, Philadelphia, San Francisco, and Washington DC. We employ over 300 full-time people, including more than 200 professional economists, industry experts and business editors—one of the largest teams of macroeconomists and thought leadership specialists. Our global team is highly skilled in a full range of research techniques and thought leadership capabilities, from econometric modelling, scenario framing, and economic impact analysis to market surveys, case studies, expert panels, and web analytics. Underpinning our in-house expertise is a contributor network of over 500 economists, analysts and journalists around the world.

Oxford Economics is a key adviser to corporate, financial and government decision-makers and thought leaders. Our worldwide client base now comprises over 1000 international organisations, including leading multinational companies and financial institutions; key government bodies and trade associations; and top universities, consultancies, and think tanks.

December 2017

Research Team

Principal researcher and modeller: Matthew Tinsley
Report director and supplementary author: Andrew Tessler
Supplementary researcher: Martin Chen

This report is confidential to MPAA and may not be published or distributed without their prior written permission.

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:

Matthew Tinsley: mtinsley@oxfordeconomics.com
Oxford Economics,
Broadwall House,
21 Broadwall,
London,
SE1 9PL
UK

Tel: +44 203 910 8000

Photo Credits

Page 2: riekephotos/Shutterstock.com
Page 21: Shutterstock.com
Page 25: Asia Images/Shutterstock.com
Page 27: Shutterstock.com



Global headquarters

Oxford Economics Ltd
Abbey House
121 St Aldates
Oxford, OX1 1HB
UK
Tel: +44 (0)1865 268900

London

Broadwall House
21 Broadwall
London, SE1 9PL
UK
Tel: +44 (0)203 910 8000

New York

5 Hanover Square, 8th Floor
New York, NY 10004
USA
Tel: +1 (646) 786 1879

Singapore

6 Battery Road
#38-05
Singapore 049909
Tel: +65 6850 0110

Belfast

Tel: + 44 (0)2892 635400

Paarl

Tel: +27(0)21 863-6200

Frankfurt

Tel: +49 69 96 758 658

Paris

Tel: +33 (0)1 78 91 50 52

Milan

Tel: +39 02 9406 1054

Dubai

Tel: +971 56 396 7998

Philadelphia

Tel: +1 (610) 995 9600

Mexico City

Tel: +52 (55) 52503252

Boston

Tel: +1 (617) 206 6112

Chicago

Tel: +1 (773) 372-5762

Los Angeles

Tel: +1 (424) 238-4331

Florida

Tel: +1 (954) 916 5373

Toronto

Tel: +1 (905) 361 6573

Hong Kong

Tel: +852 3103 1096

Tokyo

Tel: +81 3 6870 7175

Sydney

Tel: +61 (0)2 8458 4200

Melbourne

Tel: +61 (0)3 8679 7300

Email:

mailbox@oxfordeconomics.com

Website:

www.oxfordeconomics.com