

The economic contribution of the film and television industries in China



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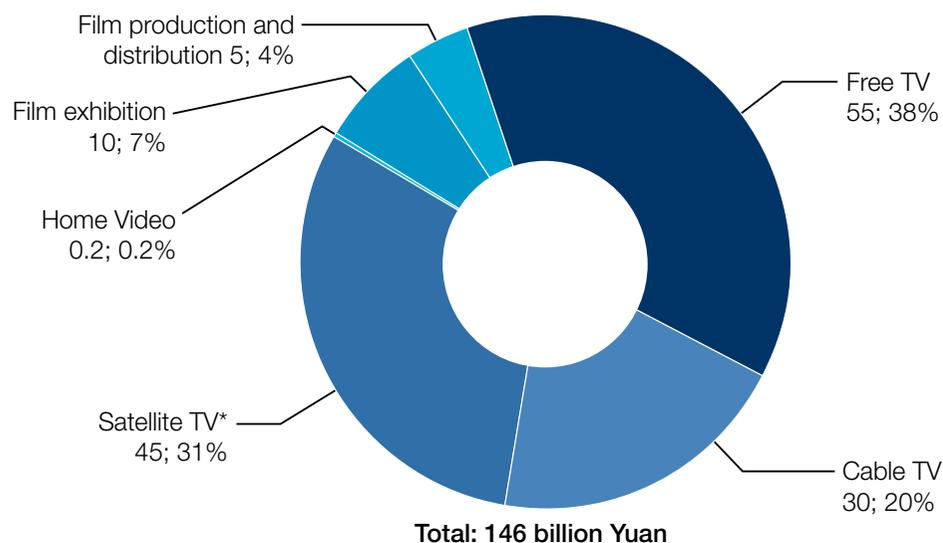
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1 Key findings

The film and television industries make a significant direct contribution to the Chinese economy...

- The film and television industries' direct contribution to Chinese GDP¹ was an estimated **146 billion yuan** in 2014². The direct activity of the sector supported **970,000** jobs and generated **39 billion yuan** in tax revenues³.

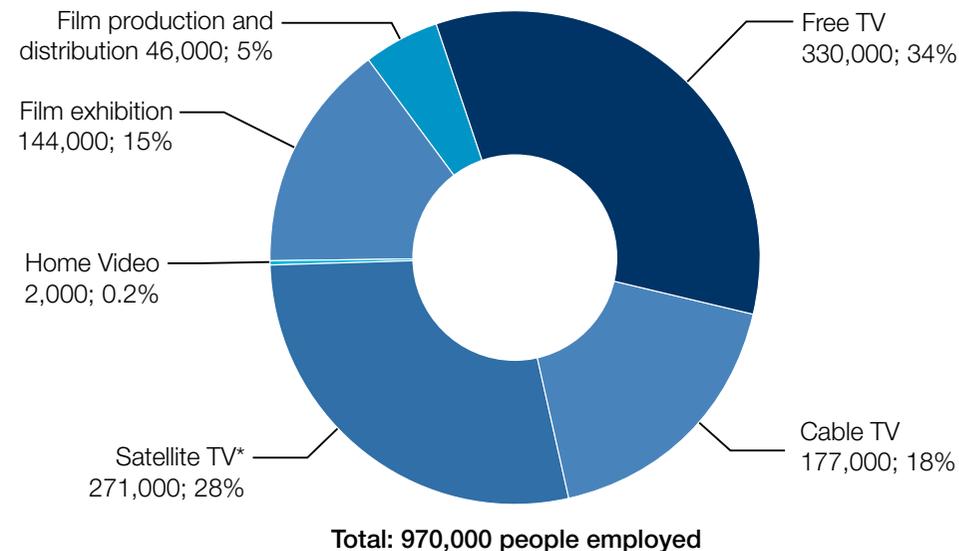
Chart 1.1: Direct GDP in the Chinese film and television industries, 2014 (billion yuan and shares)



Source: Oxford Economics estimates Note: Figures may not add up to totals due to rounding
*GDP from contracts with satellite operators to install/upgrade facilities and introduce satellite services

- 1 Throughout this report measures of GDP reflect GDP at "basic prices" (also known as gross value added or GVA). Please see Chapter 8 for more details.
- 2 2014 was the latest year for which data was available from official sources including the "Blue Book of China's Radio, Film and Television (2015)".
- 3 Consists of employees' income tax, employees' social security contributions, Enterprise Tax, and VAT and other sales taxes).

Chart 1.2: Direct employment in the Chinese film and television industries, 2014 (persons employed shares)



Source: Oxford Economics estimates Note: Figures may not add up to totals due to rounding
*Employment from contracts with satellite operators to install/upgrade facilities and introduce satellite services

- The film and television industries directly accounted for an estimated 0.2 percent of national GDP in 2014.
- By comparison the GDP contribution of the Accommodation and Catering industry in 2014 was 1.8 percent, with contributions of 4.5 percent and 6.0 percent for Transport, Storage & Postal and Real Estate respectively.
- Film and television GDP growth was an estimated 11.3 percent per year (inflation-adjusted) on average from 2011-2014. This outstripped national GDP growth of 7.6 percent per annum over the same period.
- An estimated 0.1 percent of national employment was in the film and television industries in 2014 and provided just under 0.3 percent of all government revenues.

Table 1.1: Comparison of industry GDP in 2014

Industry	GDP, 2014 (billions Yuan)	% of national GDP, 2014	2011–2014 average annual growth (inflation adjusted)
Film and Television	146	0.2%	11.3%
Accommodation and catering	1,120	1.8%	5.5%
Transportation, storage and postal	2,875	4.5%	6.6%
Real estate	3,817	6.0%	4.7%
National GDP	63,646	100%	7.6%

Source: State Administration of Press, Publication, Radio, Film and Television; National Bureau of Statistics of China; Oxford Economics estimates

...and provide additional support to the economy through multiplier effects...

- The film and television industries also support economic activity and jobs across the wider Chinese economy in a number of ways through “multiplier” effects. Purchases by the film and television industries from their suppliers within China generated an additional “indirect” GDP contribution of 163 billion yuan in 2014. This indirect activity supported a further 2.1 million jobs and generated 17.3 billion yuan of tax revenues.

Taking into account “multiplier” effects, the Chinese film and television industries contributed 396 billion yuan in GDP to the national economy in 2014...

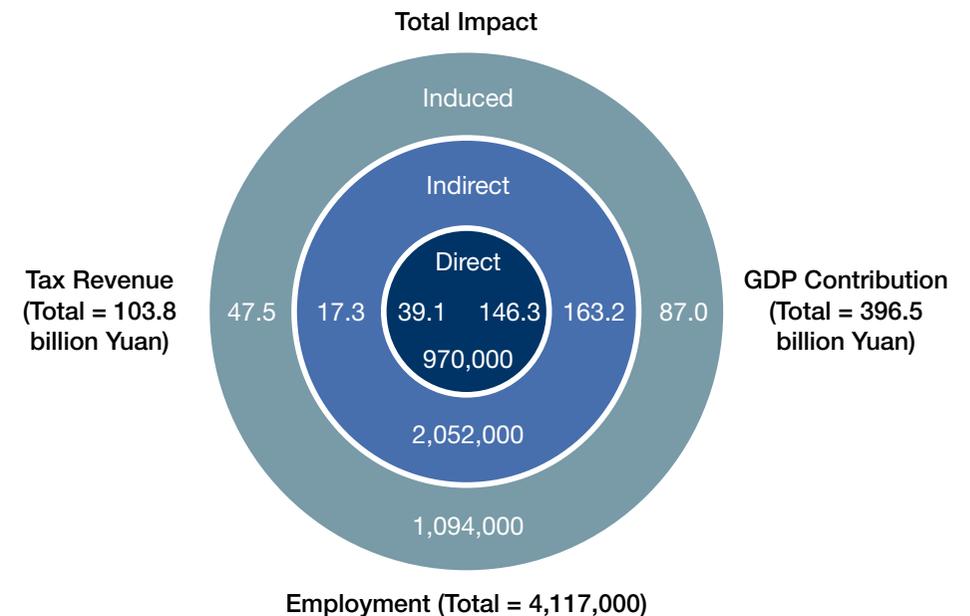
- Furthermore, those employed either directly or indirectly by the film and television industries spend their wage income on goods and services. These “induced” effects generated a further 87 billion yuan of GDP in 2014. This additional activity supported 1.1 million jobs and provided 47.5 billion yuan in Chinese tax revenue.

... increasing the total economic contribution.

- Taking the direct, indirect and induced contributions together we estimate that the film and television industries’ total contribution to GDP in 2014 was **396 billion yuan** (0.6 percent of economy-wide GDP). It supported **4.1 million jobs** (0.5 percent of national employment) and generated tax revenues of **104 billion yuan** (0.7 percent of total revenues).

... supporting 4.1 million jobs and generating 104 billion yuan in taxes.

Figure 1.1: Total contribution to Chinese GDP, tax and employment, 2014



Source: Oxford Economics estimates Note: Figures may not add up to totals due to rounding

The sector as a whole creates high productivity jobs...

- Each person employed in the film and television sector generated, on average, 151,000 yuan of GDP – almost 90 percent higher than the economy-wide average of 79,500 yuan per worker in 2014. High productivity is reflected in employees’ average earnings, which at 48,500⁴ yuan a year are around a third higher than the average across the whole economy (36,300 yuan⁵).

...and has enjoyed strong growth over the last decade...

- Domestic box office revenues have grown immensely over the last decade. Revenues from movie theatre releases were almost 20 times larger in 2014 than in 2004.
- China became the second largest theatrical film market in the world after the USA in 2012. The Chinese market now accounts for just over 13 percent of global box office revenues.

- Box office growth continues to be extremely high. Total takings in 2014 were 4.8 times higher than in 2009. In the last full year alone revenues expanded by 36 percent to reach 29.6 billion yuan (US\$4.8 billion) in 2014.
- Taking inflation into account real box office revenues were almost 4 times higher in 2014 than they were in 2009.
- Combined television and radio revenues have more than doubled from 2009-2014 (non-inflation adjusted).
- On its own the television industry’s real (inflation-adjusted) revenues have increased by 87 percent from 2009-2014.
- Chart 1.3 summarises inflation-adjusted box office and television revenues (i.e., gross output) from 2009 to 2014. Revenues (measured in 2014 prices) increased by 87 percent over the period, from 210 billion yuan in 2011 to 393 billion yuan in 2014.

Table 1.2: Overview of the economic contribution of the Chinese film and television industries in 2014

Metric	Gross Output (billion yuan)*		GDP in basic prices (billion yuan)		Employment (’000s jobs)		Employee wages (billion yuan)		Tax† (billion yuan)	
	Direct	Total	Direct	Total	Direct	Total	Direct	Total	Direct	Total
Free TV	154	447	55	150	330	1,524	18	61	15	39
Cable TV	83	240	30	81	177	817	10	33	7.9	21
Satellite TV†	127	367	45	123	271	1,249	15	50	12	32
Home video	0.7	1.7	0.2	0.6	2.1	6.2	0.1	0.2	0.1	0.2
Film Exhibition	30	84	10	28	144	366	3.3	11	2.8	7.4
Film Distribution & Production	13	40	5.0	14	46	154	1.6	5.5	1.3	3.5
Total	407	1,180	146	396	970	4,117	47	161	39	104

Source: Oxford Economics estimates Note: Figures may not add up to totals due to rounding

*Includes VAT and other taxes

†Impact from contracts with satellite operators to install/upgrade facilities and introduce satellite services in coming years

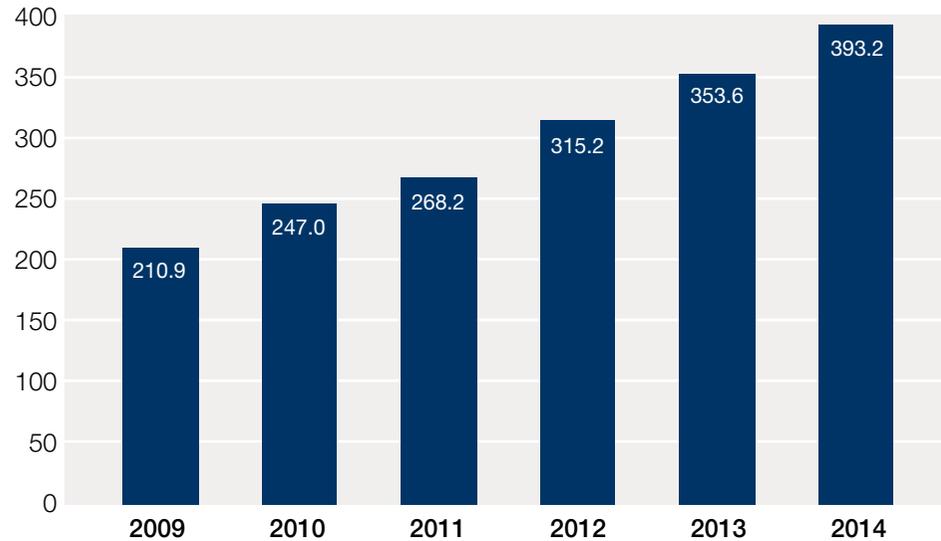
‡Consists of VAT (and other sales taxes), corporation (enterprise) tax, personal income tax and employees’ social security contributions

4 Oxford Economics estimate based on data from the National Bureau of Statistics of China.

5 Oxford Economics estimate based on data from the National Bureau of Statistics of China.

Chart 1.3: Film box office and television revenues, inflation-adjusted (2014 prices)⁶

Billions yuan, inflation adjusted (2014 prices)



Source: Blue Book of China's Radio, Film and Television (2015), Oxford Economics estimates

...with huge potential for future growth...

- The dramatic growth in box office receipts and TV revenue reflects a huge surge in the demand for film and TV entertainment in China. The factors underpinning the increase – the world's largest population, strong economic growth, rising incomes and a growing middle class – should continue to drive the sector in the future.

...while export earnings are also significant.

- The sector earned an estimated 2.1 billion yuan in export receipts in 2014, equivalent to 0.15 percent of total national exports of services. Of this, 90 percent was generated by the film industry, with the remaining 10 percent due to activities in the television industry⁷.

⁶ TV industry revenues for 2006-9 were estimated by assuming the proportion of TV revenue within the total TV and radio industry was the same as in 2010.

⁷ Note that export revenues are included within GDP and are therefore captured in the economic contribution of the film and television industries.

2 How we arrived at these figures

Oxford Economics was commissioned by MPA-China and the China Film Distribution and Exhibition Association (CFDEA) 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 (SAPPRFT) in the “Blue Book of China’s Radio, Film and Television” (BBCRFT). The most recent version of this publication was released in July 2015 and provides statistics relating to the 2014 calendar year.

2.1 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 BBCRFT. Television employment is also based on figures reported in BBCRFT. 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, TV, film and video” sector from official Input-Output tables. For further details of the methodology please see Chapter 8.

2.2 Additional economic contributions

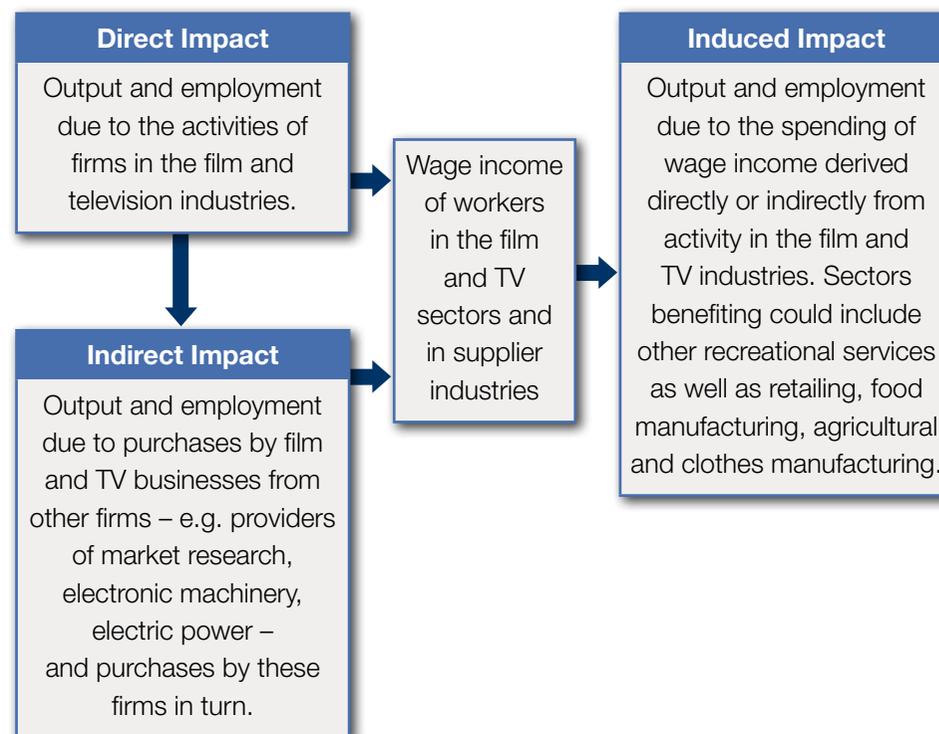
The **total economic contribution** of the film and television industries on the Chinese economy takes into account two further channels of economic contribution:

- **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 2007 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.

Figure 2.1: The channels of economic contribution



3 Film industry

In this chapter we set out the economic contribution of the film industry in more detail. We examine two subsectors – the production & distribution sector, and the exhibition sector. For each we assess their contribution to GDP, taxation and employment through direct, indirect and induced effects. The economic contribution of the home video industry is also examined.

3.1 Film production and distribution

“Film production” relates to the physical process of producing a film, e.g., the filming of scenes at a studio or the editing and revision of the final content. Key supplier sectors to film production include fashion and make-up, hi-tech equipment manufacturing and the utilities sector.

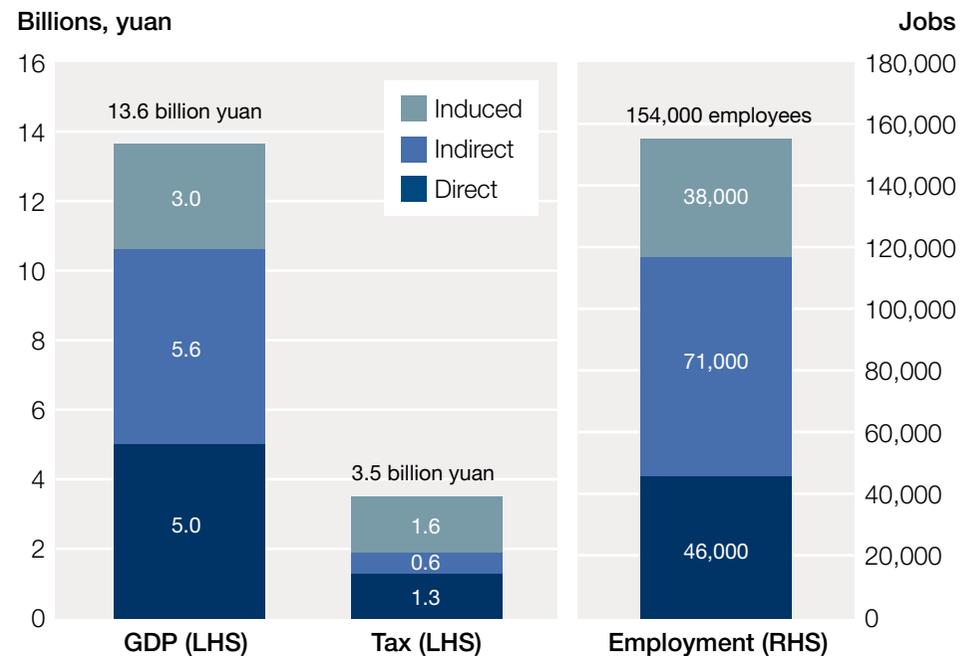
The ‘film distribution’ sector involves the launching and sustaining of films in the market place, including the logistical task of shipping film prints around the world, and building audience awareness and interest through PR and marketing campaigns. Key supplier sectors include business services (particularly advertising and PR) and transport services.

Film production and film distribution revenues also include those generated from sales of movies to television.

In China there is significant integration of film production and film distribution, with much activity undertaken by firms involved in both activities, e.g., China Film Group. We therefore treat these two activities/industries as a single entity.

In 2014 film production and distribution activity was worth some 5.0 billion yuan in GDP and directly employed 46,000 people. This activity helped to generate 1.3 billion yuan in tax revenue. Taking into account indirect and induced effects these contributions rise to 13.6 billion yuan in GDP, 154,000 jobs and 3.5 billion yuan for the Chinese government in tax receipts.

Chart 3.1: Economic contribution of film production and distribution in 2014



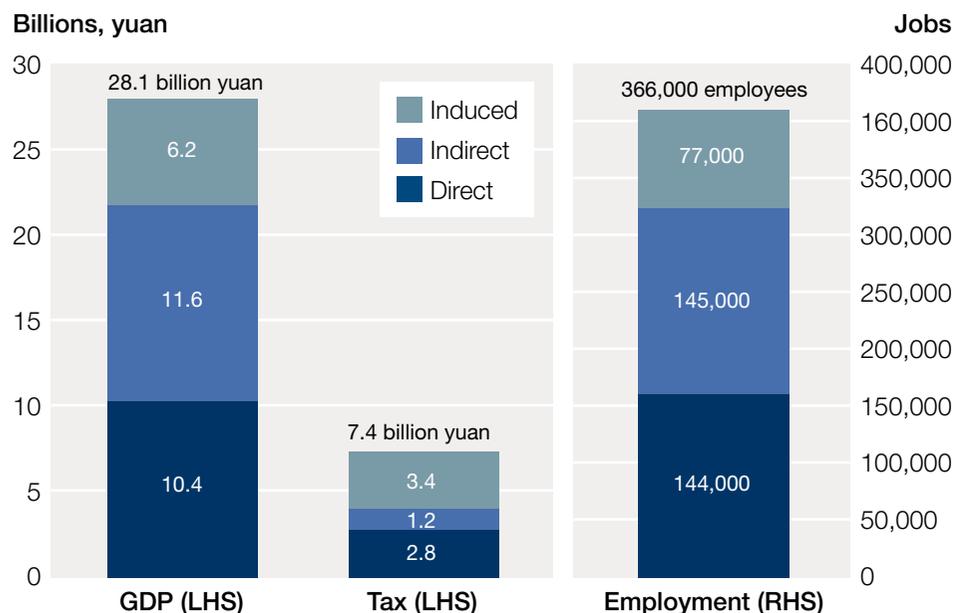
Source: Oxford Economics estimates Note: Figures may not add up to totals due to rounding

3.2 Exhibition of films

Film exhibition is the process of screening films to the public, most commonly at a cinema. Exhibition is a bigger contributor to Chinese GDP and employment than production and distribution. Key supplier sectors include food and beverage wholesalers and maintenance services.

The direct GDP contribution of film exhibition was nearly 10.4 billion yuan in 2014 and supported 144,000 jobs. This activity helped to generate 2.8 billion yuan in tax revenue. Taking into account indirect and induced effects gives total contributions of 28.1 billion yuan in GDP, 366,000 jobs, and 7.4 billion yuan for the government in tax receipts.

Chart 3.2: Economic contribution of film exhibition in 2014



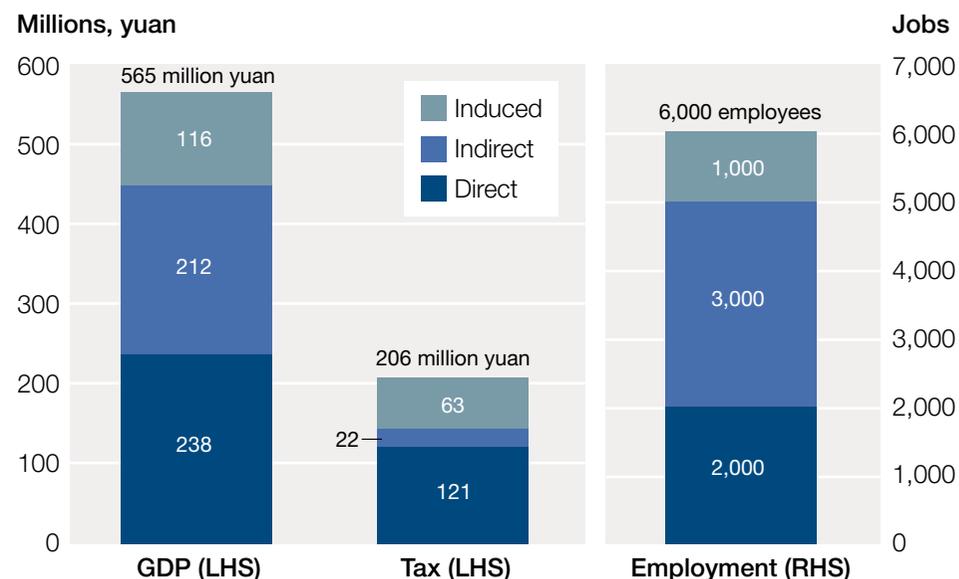
Source: Oxford Economics estimates Note: Figures may not add up to totals due to rounding

Exhibition is a bigger contributor to Chinese GDP and employment than production and distribution combined.

3.3 Home video

This sector comprises the retail and rental of DVDs, VCDs and Blu-ray Discs, but excludes hardware such as DVD players. The sector directly contributed an estimated 238 million yuan in GDP for the Chinese economy in 2014, with associated employment of 2,000 jobs and tax revenues of 121 million yuan. Once indirect and induced effects are included the sector's GDP contribution goes up to 565 million yuan, supporting 6,000 jobs and generating 206 million in tax receipts.

Chart 3.3: Economic contribution of the home video market in 2014



Source: Oxford Economics estimates Note: Figures may not add up to totals due to rounding

3.4 Trends over time

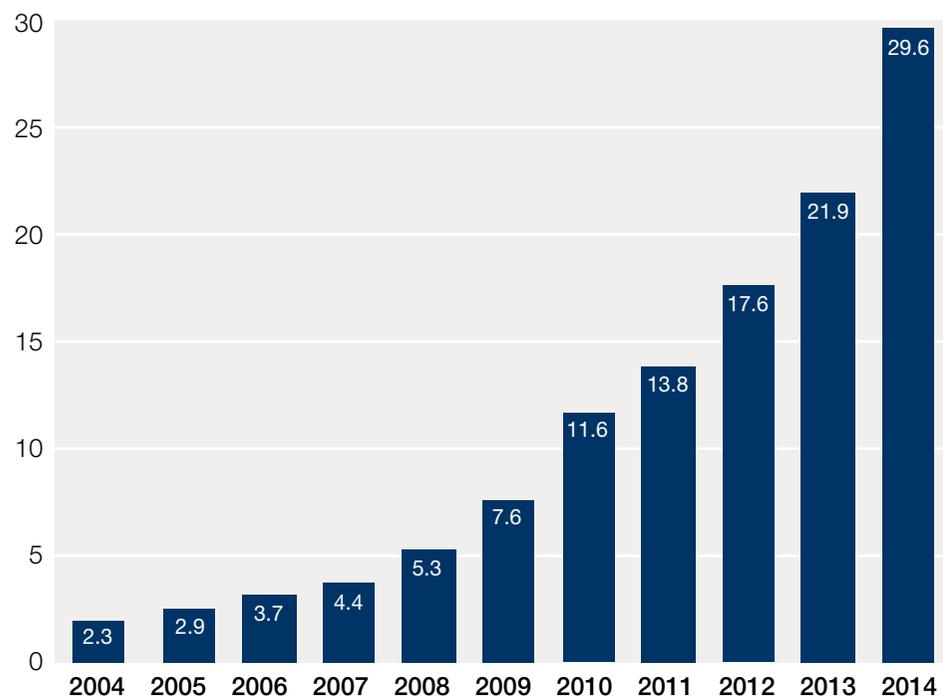
The theatrical film market in China has grown immensely over the last decade. Total box office revenues were almost 20 times higher in 2014 than in 2004. In the process China became the second largest market in the world for theatrical releases (after the USA) in 2012. This coincided with the raising of the quota for foreign films released on a revenue-sharing basis (with foreign producers) from 20 to 34. The Chinese market accounted for just over 13% of global box office revenues in 2014.

The tremendous rate of growth has been sustained year-on-year and shows little sign of slowing down. Box office revenues in 2014 were just under 5 times higher than in 2009. In the last full year alone revenues expanded by 36% to reach 29.6 billion yuan (US\$4.8 billion) in 2014. Four of the five highest grossing films of all time in China have since been released in 2015 (beyond the period of this study). The US-produced “Furious 7”, released in April 2015, became the top grossing film of all time in China, with a total gross of 2.426 billion yuan. This record was quickly overtaken by the Chinese-produced “Monster Hunt”, which was released a few months later in July, and has since grossed 2.248 billion yuan as of September 2015.

Chart 3.4 shows the impact of the growth in the theatrical film market in “real” terms – that is removing the effects of economy inflation. Real revenues in 2014 were close to four times higher than in 2009 and almost 13 times greater than in 2004.

Chart 3.4: Film box office revenues, inflation-adjusted (2014 prices)

Billions yuan, inflation adjusted (2014 prices)



Source: State Administration of Press, Publication, Radio, Film and Television; Oxford Economics

China’s film industry has achieved tremendous growth over the last decade. Total box office receipts in 2014 were almost 20 times higher than in 2004 and 5 times higher compared with 2009.

3.5 Cinema development and potential impacts

Box office growth has occurred alongside an increase in the construction of cinema screens across the country and with it the number of multiplex screens. There were around 23,600 cinema screens in China in 2014, 30% more than the previous year and five times the number in 2009⁸.

New facilities such as multiplexes may, in theory, produce spillover effects across their local communities by making local areas more desirable places to live – driving property prices and local growth. While the basic concept behind “locational amenities” driving property price growth is well established (hedonic pricing), little research on the specific impacts of cinemas on property pricing appears to have been undertaken either in Western countries or China.

Nonetheless, some authors have pointed to a similar effect – that cinemas (and/or other entertainment facilities) embedded within retail malls in other countries may have increased the desirability of such malls and, in turn, raised mall rental prices.

For example, Christiansen *et.al.* (1999) developed a “mall entertainment index” (EI) based on a number of attributes (including the presence of movie theatres). They found a relationship between the EI and mall productivity indicators such as sales per square foot and average lease rates⁹.

Likewise, a study of Malaysian malls found retail owners and tenants rating “leisure facilities” (i.e., cinema theatres and children’s playgrounds) as one of the more attractive mall attributes, with the authors suggesting that attractive attributes could have a significant influence on rental prices¹⁰.

8 Source: Blue Book of China’s Radio, Film and Television (2015).

9 Christiansen, T., Comer, L., Feinberg, R., Rinne, H., “The effects of mall entertainment value on mall profitability” (1999), *Journal of Shopping Centre Research*, Vol. 6, Is.2.

10 Salleh, K., and Ruddock, L., “The development of a hedonic price model of retail property facilities design” in Hughes, W. (Ed) 15th Annual ARCOM Conference 15-17 September 1999, Liverpool, John Moores University, Association of Researchers in Construction Management Vol. 1 337-44.

More specific research on cinema impacts was conducted by Ooi and Sim (2007). The authors specifically focussed on the impact of a “Cineplex” (i.e., multiplexes) in nine Singapore shopping centres using a survey of 1,283 shoppers. The authors found that 72% of interviewees felt the presence of a Cineplex would entice them to visit a shopping centre more often. Although the presence of a Cineplex does not directly increase spending in malls, it was found to do so indirectly by increasing the time patrons spent in shopping centres, which in turn is positively related to mall spending levels¹¹.

While no equivalent research appears to have been undertaken in China, the above research may be relevant to the future development of the Chinese film exhibition sector. It suggests that cinema facilities may act as an “anchor tenant” within malls, generating spillover effects and potentially increasing the overall value of the mall itself through higher rents/revenues.

3.6 Home entertainment development

The home entertainment industry in China as measured by retail and rental of physical media (e.g., DVDs and Blu-ray discs) contributes a relatively small amount to total film and television activity compared with other countries. Retail sales and rental of physical media made up around 0.2 percent of direct revenue in the Chinese film and television industries in 2014. This is against, for example, estimates of 8.7% in Australia (in 2013)¹², 8.4% in the UK (2013)¹³, 4.8% in Japan (2011)¹⁴ and 7.6% in New Zealand (2011)¹⁵.

However, the physical retail and rental market in developed markets has been declining for a number of years, in both absolute terms and as a share of the film and TV market, as consumers switch to internet-based delivery platforms. For example physical home media’s share of revenues in Australia declined from 13.2 percent to 8.7 percent between 2010 and 2013, while in the UK it fell from 12.4 percent to 8.4 percent between 2011 and 2013.

11 Ooi, J., Sim, L., “The magnetism of suburban shopping centres: do size and Cineplex matter?”, (2007), *Journal of Property Investment & Finance*, Vol. 25, Is. 2.

12 Economic Contribution of the Film and Television Industry, Deloitte Access Economics (2015).

13 Estimate based on data from the Office for National Statistics (ONS) in the UK and the BFI Statistical Yearbook 2014.

14 Economic Contribution of Japanese Film and Television Industry, Mitsubishi Research Institute, Inc. (2012).

15 Economic contribution of the New Zealand film and television industry, PricewaterhouseCoopers (2012).

Given the current position of the home entertainment market in China and the continuing development of internet-based delivery platforms, it is therefore likely the market’s potential will only be realised by growth in services such as IPTV (Internet Protocol Television), Video on Demand (VOD) and online streaming services. Recent data shows that revenues from IPTV in China increased by almost a third from 2013-2014, while revenue from “a la carte” services on cable and IPTV rose by a quarter¹⁶.

Further evidence comes from an announcement in June 2015 by the Chinese e-commerce company Alibaba that they plan to launch a video streaming service with a focus on paid-for content¹⁷. In addition, a number of major online companies have initiated plans to enter the film market and produce movies, including Youkou Tudou, Alibaba and Tencent¹⁸. Online delivery of content is expected to form a major part of their distribution strategies. A senior representative of iQiyi (an online streaming service owned by Baidu) expects that “in five years, revenues from internet distribution will be equal to box office in China”¹⁹.

China had 452 million households in 2014²⁰. In addition there were 200 million fixed broadband subscriptions²¹, the highest of any country in the world. However, measured on a per capita basis it still lags significantly behind more advanced economies. There were an estimated 14.4 fixed broadband subscriptions per 100 inhabitants in China in 2014, compared with, for example, 29.3 in Japan, 38.8 in South Korea and 37.4 for the UK. Clearly, there is huge potential for growth in IPTV, VOD and online services.

16 Screen Daily.

17 Source: Reuters (June 2015) <http://www.reuters.com/article/2015/06/14/us-alibaba-video-idUSKBN00UO0T20150614>

18 Hollywood Reporter (September 2014): <http://www.hollywoodreporter.com/news/chinese-online-giant-tencent-sets-733932>

19 Hollywood Reporter (October 2014): <http://www.hollywoodreporter.com/news/busan-chinas-online-movie-revenues-738274>

20 China National Bureau of Statistics.

21 International Telecommunication Union.

As of the second quarter of 2014 China already had the largest number IPTV subscribers in the world at just over 35 million²². But the potential for growth in IPTV services is enormous when one considers there are an estimated 235 million subscribers of traditional cable television services²³. A recent study expects IPTV subscribers to grow to 77 million by 2020 and generating US\$2.3 billion in revenue (14.2 billion yuan in 2014 exchange rates)²⁴.

3.7 Merchandising and licensing

The Chinese market for movie tie-in products such as toys, books and video games is small in relation to box office revenues. This can be highlighted by the importance of box office receipts to total movie-related revenue in China. Box office takings account for an estimated 80 percent of all revenues from movies in China²⁵. In the US, which has a much more developed merchandising market, the figure is an estimated 22 percent. The historic underdevelopment in China has been attributed to problems with piracy and capabilities in devising merchandising strategies. However, there are signs that a significant market for licensed products is emerging, spurred on by a growing demand for genuine products. Alibaba recently partnered with Walt Disney to distribute online merchandise for “Avengers: Age of Ultron”²⁶. In addition, Mtime, a Chinese online movie information service has begun selling merchandise via its websites and in physical stores located in theatres operated by Wanda Cinemas²⁷. This blending of movie merchandising, promotion and exhibition may play an important role in stimulating future growth in the film industry.

22 Point Topic.

23 Blue Book of China's Radio, Film and Television (2015).

24 Digital TV Research (2014).

25 China Daily (August 2013): http://usa.chinadaily.com.cn/opinion/2013-08/15/content_16895018.htm

26 Source: The Wall Street Journal (May 2015): <http://www.wsj.com/articles/alibabas-tmall-to-sell-avengers-age-of-ultron-movie-merchandise-1431516416>

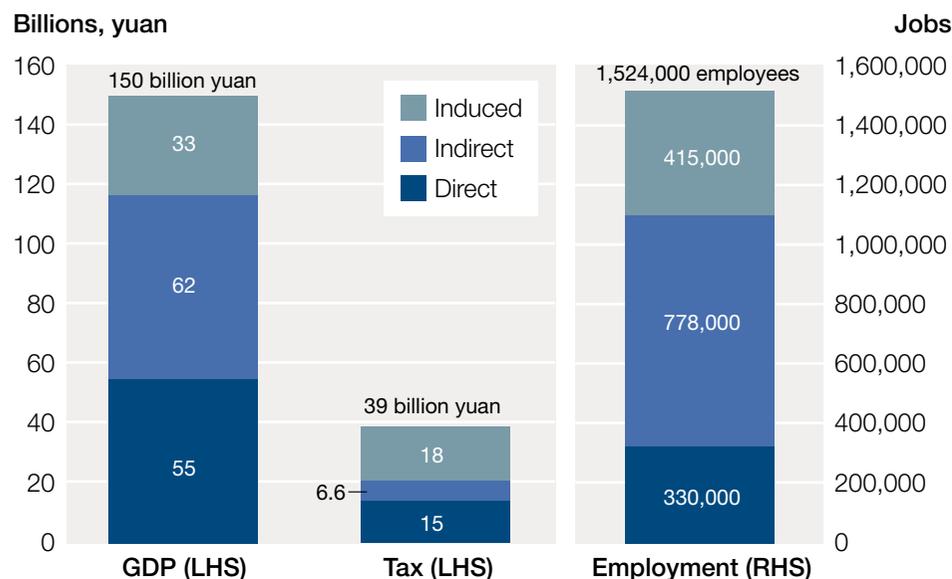
27 Source: The New York Times (September 2015): <http://www.nytimes.com/2015/08/10/business/mtime-helps-hollywood-clear-chinas-marketing-hurdles-and-reach-fans.html>

4 Television industry

4.1 Free-to-air television

Free-to-air television broadcasting involves the production and distribution of TV content on free-to-air channels, i.e., those that do not require a channel subscription fee. In China this market is dominated by the state broadcaster CCTV (Chinese Central Television). Key suppliers include the audio-visual equipment manufacturing sector and independent TV production companies.

Chart 4.1: Economic contribution of free-to-air television in 2014



Source: Oxford Economics estimates Note: Figures may not add up to totals due to rounding

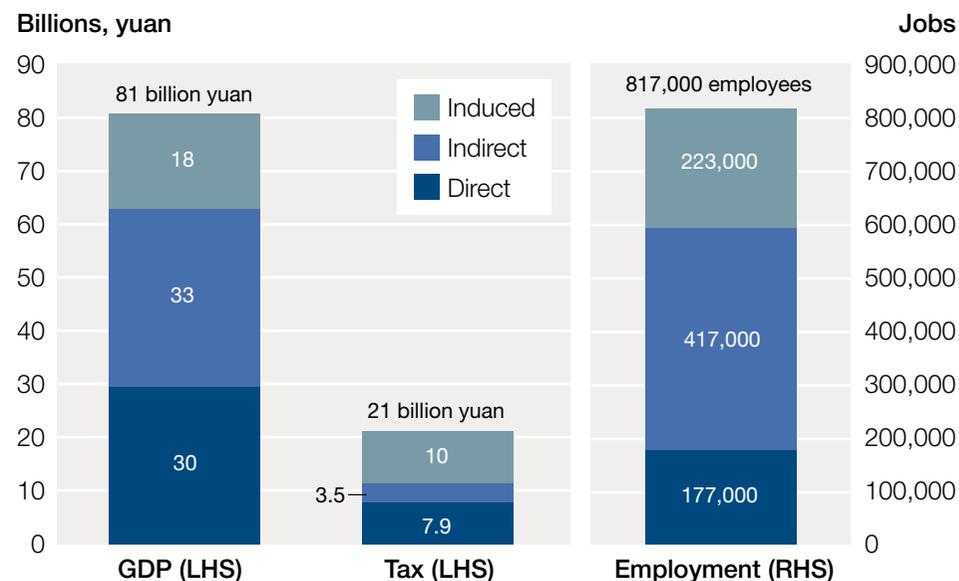
The direct contribution of free-to-air TV was an estimated 55 billion yuan in GDP to the Chinese economy in 2014, supporting around 330,000 jobs and producing 15 billion yuan in tax revenue. Including indirect and induced effects the industry contributed just over 150 billion yuan in GDP, supported over 1.5 million jobs and raised 39 billion yuan for the Chinese government in tax receipts.

4.2 Cable television

There are an estimated 235 million cable television subscribers in China²⁸, who receive a mix of free-to-air and pay TV channels.

Cable television activity, including the production and distribution of content and cable subscription services, directly contributed 30 billion yuan in GDP for the Chinese economy in 2014, supported 177,000 jobs and generated 7.9 billion yuan in tax revenue. Taking into account indirect and induced effects the GDP contribution rises to 81 billion yuan, with associated employment of 817,000 jobs and 21 billion yuan in taxation for the government.

Chart 4.2: Economic contribution of cable television in 2014



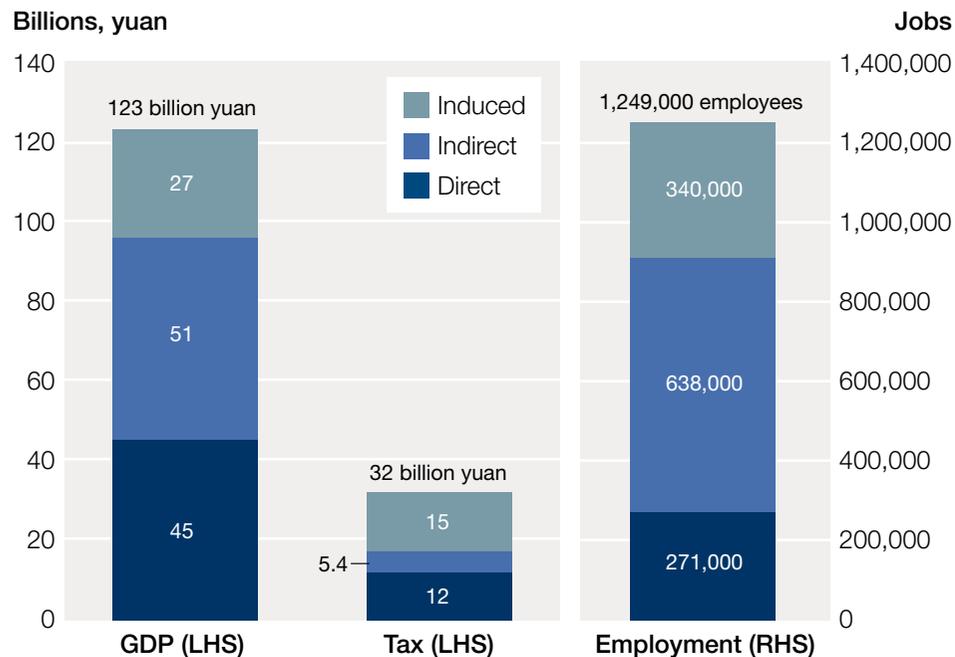
Source: Oxford Economics estimates Note: Figures may not add up to totals due to rounding

28 Blue Book of China's Radio, Film and Television (2015).

4.3 Satellite television

This sector consists of satellite-related revenue associated with income from the upgrading/installation of facilities²⁹. We estimate that such activities were directly worth 45 billion yuan in GDP in 2014, directly created 271,000 jobs and generated 12 billion yuan of government tax revenue. Once indirect and induced effects are included the sector contributed 123 billion yuan to national GDP, around 1.25 million jobs and delivered 32 billion yuan in tax receipts.

Chart 4.3: Economic contribution of satellite television in 2014



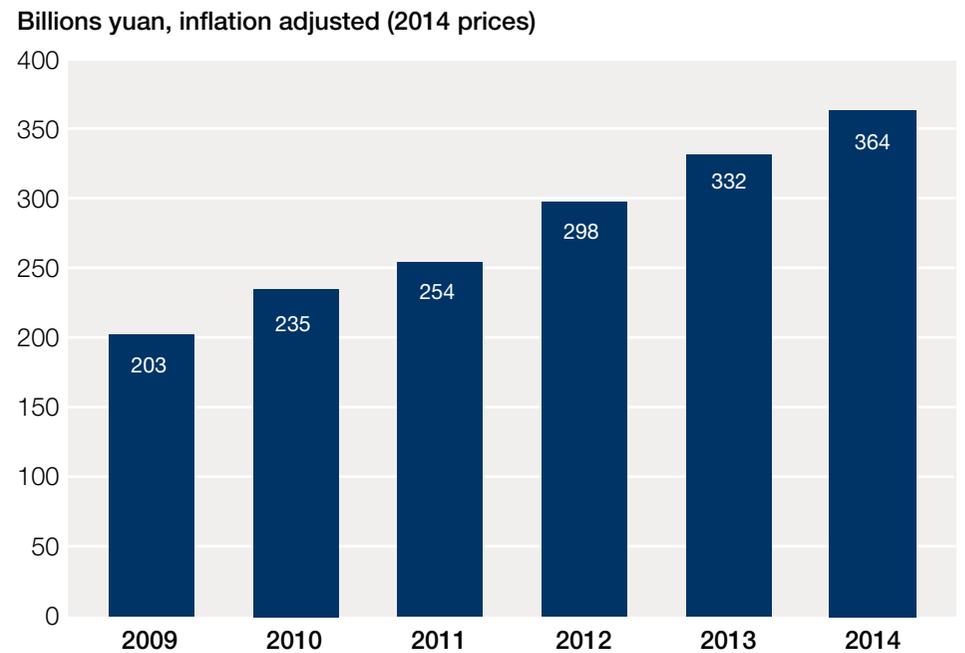
Source: Oxford Economics estimates Note: Figures may not add up to totals due to rounding

²⁹ This revenue is categorised as “Other TV” in the official publication “Blue Book of China’s Radio, Film and Television (2015)”. Enquiries made to the authors of the publication (State Administration of Radio, Film and Television) revealed that it captures income/revenue from contracts signed with satellite operators who will install/upgrade facilities to rural areas and introduce satellite TV services to urban households in coming years.

4.4 Trends over time

Historical data on total revenue for television and radio provide an indication of how the economic contribution of television has developed since 2009. Combined television and radio revenues (non-inflation adjusted) have more than doubled from 2009-2014³⁰. This represented a 79% increase in real (inflation-adjusted) revenues for the television industry, from 203 billion yuan in 2009 to 364 billion yuan in 2014. It is evident that the economic contribution of the television industry has grown rapidly in recent years.

Chart 4.4: TV revenues, inflation-adjusted (2014 prices)



Source: Blue Book of China’s Radio, Film and Television, Oxford Economics estimates

³⁰ Blue Book of China’s Radio, Film and Television (2015).

5 Exports and film festivals

5.1 Exports

The film and television sector earned an estimated 2.1 billion yuan in export receipts in 2014, or 0.15 percent of whole economy service exports. Of this, around 90 percent was generated by the film industry, with the remaining 10 percent due to the activities of television³¹. The sector's 0.15 percent share of Chinese service exports compares with figures of 2.0 percent for financial services, 8.7 percent for telecommunications and 2.0 percent for insurance & pension services³². (It should be noted that these export figures represent a subset of the GDP values reported in Chapters 3 and 4.)

Table 5.1: Chinese service exports in 2014

Industry	Exports (billions yuan)	% of total services exports
Film and television	2.1	0.15%
Financial	27.9	2.0%
Telecommunications & IT	124.3	8.7%
Insurance & pension	28.2	2.0%
Construction	94.6	6.6%
Transport	235.6	16.5%

Source: State Administration of Press, Publication, Radio, Film and Television; WTO

31 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 2014.

32 WTO.

5.2 Film festivals

China hosts a number of film festivals, including the Beijing International Film Festival and the Shanghai International Film Festival. The rising importance of these events to the domestic and international movie industries has mirrored the rapid expansion of the Chinese film market. They provide a platform for the US and other overseas film industries to showcase movies, and to build relationships with counterparts in China. This is highlighted by the planned launch of the first Qingdao International Film Festival in 2017³³.

As well as promoting domestic productions and upcoming foreign releases, the festivals show highly regarded Chinese and overseas films from the past (such as "Hollywood classics"). Festival-goers also get to see movies from countries with smaller film industries such as New Zealand³⁴. The experiences of people attending film festivals in China therefore help to enhance appreciation and interest in films within the country.

33 Hollywood Reporter (May 2014): <http://www.hollywoodreporter.com/news/cannes-wanda-launch-film-festival-704901>

34 Source: Xinhuanet (April 2015): http://news.xinhuanet.com/english/2015-04/14/c_134148756.htm

6 Tourism

Much recent attention has been paid to the phenomenon of film and TV tourism around the world. Oxford Economics has investigated the global development of this phenomenon with specific reference to the UK, as a part of previous research.³⁵

Within Asia, the growth of South Korean *Hallyu* (popular culture including films, TV, music and food) has been well documented. *Hallyu* has acted to induce large number of foreign visitors to visit South Korea. Many of these come from within the Asia region.

There would not appear to be any true equivalent to *Hallyu* in respect of Chinese film and TV. Further, while it may be that some foreign visitors are induced to visit China due to Chinese film and TV productions, there has been no research 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 have pointed to the fact that Chinese film and TV productions may be 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. Therefore (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, the studies referred to above also suggest that film and TV induced domestic tourism is a tangible phenomenon and that it would make an important contribution to such tourism. In particular, the following studies are of note:

- Wu and Hou³⁶, undertook survey work at Longquan Villa in Longquan Mountain Village, site of the CCTV series *Story of Liu Laogen*. According to their 2004 survey work, 74% of tourists come to the village “to see the home of Liu Laogen”.

35 Oxford Economics (2010), “*The Economic Impact of the UK Film Industry*”.

36 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.

- Pan and Chen³⁷ conducted a study of Peach Blossom Island in Zhejiang Province, scene of a number of past film dramas, including “The Eagle Shooting Heroes” and other films based on the works of the novelist Jin Yong. Some 45% of tourists surveyed in 2007 indicated that Jin Yong’s works and the films based on them influenced their choice to visit the island. (Some 600,000 people visited the island in 2006). While 70% of tourists wanted to experience the island’s scenery, 50% also wanted to have a “film and TV experience”, while 22% wanted to visit scenes where Jin Yong themed films were made. (Of course, some of these tourists may have visited the island due to the novels even if the films had never been made.)
- Pan has pointed to film-induced tourism in Hengdian and Xinchang³⁸. 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.
- Peng has pointed to the contribution that the film and TV industry can make to tourism within the Xiangxi minority region³⁹.
- Likewise, Liu has noted the contribution that film and TV productions featuring “Northeast subjects” have made towards regional tourism⁴⁰.

While these studies are of interest in their own right, as indicated, they do not allow for a comprehensive measure of the economic impact of film-induced domestic tourism. Further research may allow such a figure to be developed.

37 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.

38 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.

39 Peng, Y (2009), “Research on the Impact of the Film and TV Industry on the development of Tourism in the Xiangxis Minority Region”, *Commercial Research* No. 2.

40 Liu, H., (2009), “The Impact of ‘Northeast Subject’ TV and Film Plays on Local Tourism Industry and the Related Countermeasures” *Journal of Harbin University of Commerce* No. 3, Serial No. 106.

Nonetheless, these and other studies also point to other issues which are relevant to efforts to promote film tourism within China. 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 tourists⁴¹.

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 television productions. One example is emphasising the themes of snow and ice culture in productions featuring Heilongjiang, or emphasising the area’s folkloric traditions.

More mature film destinations may need to take a somewhat different approach however. Pan and Chen’s work on the importance of film tourism is noted above. However the authors also stress the importance of building integrated tourist destinations and point out that film-related attractions alone will not be sufficient to sustain tourism over the longer term. In the case of Peach Blossom Island, film can therefore act as an important initial attractor. However local tourism authorities should not rely on visits to specific film-related sites alone, but also need to emphasise the area’s natural, historical and cultural attractions. Doing so could promote a stronger and more diversified base for tourism.

Likewise, Wu and Hou note that while film is the major motivation for visits to Longquan Villa, underlying motives include the linkage between film and factors such as “confirmation”, pursuing dreams, escape and seeking a beautiful environment. An obvious implication is that more mature film tourism destinations should seek to tap into these motivations, by offering additional attractions to film-related tourists which emphasise these features (e.g., marketing lesser-known local beauty spots).

One major success story of film and TV related tourism is Hengdian World Studios. The studio is one of the world’s largest film studios and also one of the top tourist destinations in China⁴². The studio site contains large-scale replicas of buildings, streets, towns and palaces from different periods of Chinese history, alongside a variety of scenic locations such as forests, hills and cliffs. The studio is used by numerous production companies and is open to tourists. Attractions have been built specifically to develop it as a major tourist destination, such as live shows and an amusement park. An estimated 11.8 million tourists visited the studio in 2012⁴³.

The Qingdao Oriental Movie Metropolis is currently being developed by the Wanda Group⁴⁴. The complex will house film and television studios, museums, film exhibition centres and resort hotels. The site will also contain the Wanda Cultural Tourism City, a major cultural, tourism and commercial centre which will house an indoor theme park among other attractions. An estimated 50 billion yuan will be invested in the complex in total.

The overall conclusion on Chinese film and television-related tourism is as follows. The market is still largely undeveloped. There appears to be little foreign film-inspired tourism. Apart from a few “hot spots” there appears to be a significant development potential for domestic film and television tourism. However the strategies that various regions and locations need to pursue are likely to differ. Areas with little past experience of film and TV tourism may seek to focus on integrating their local tourism efforts with film and television productions, emphasising particular characteristics of their regions and ensuring that local facilities are suitable for the new arrivals.

More mature locations, on the other hand, might seek to broaden their appeal to those who were induced to come to an area by films and TV by offering a diverse range of activities. These might also tap into some of the basic motivations related to film-related tourism in the first instance such as a desire to see beautiful scenery or “escape”.

41 Ran, H and Lu, Y, (2006), “A Discussion on the Development of Film and Television Tourism in Xinjiang”, *Journal of Xinjiang Normal University*, Vol. 25, No. 3.

42 <http://www.chinawhisper.com/top-20-most-visited-tourist-destinations-in-china/>

43 China Daily (2013): http://usa.chinadaily.com.cn/epaper/2013-09/17/content_16975928.htm

44 Wanda Group: http://www.wanda-group.com/2013/chairmannews_0922/495.html

7 Conclusions

This report provides a detailed view of the film and television sectors in China, systematically quantifying the economic contribution of various sub-sectors of the industry. The estimates indicate that film and television make a notable contribution to economic activity in the country, directly accounting for 0.2 percent of national GDP, 0.1 percent of total jobs and 0.3 percent of all government revenues. These figures equate to 146 billion yuan, 970,000 jobs and 39 billion yuan in tax revenues respectively.

Moreover, including indirect and induced effects (via the supply chain, and the spending of those employed directly and indirectly), the contribution rises to 0.6 percent of national GDP, 0.5 percent of jobs and 0.7 percent of government revenues. This is equivalent to 396 billion yuan in GDP, 4.1 million jobs and 104 billion yuan in tax revenue. In addition to these effects are less readily quantifiable “catalytic” contributions such as the economic benefit derived by internal Chinese film and television induced tourism.

Box office revenues have grown immensely over the last decade, resulting in China becoming the second largest theatrical film market in the world after the USA in 2012. The Chinese market now accounts for just over 13 percent of global box office revenues. Box office growth continues to be extremely high – in the last year alone revenues expanded by 36% to reach 29.6 billion Yuan (US\$4.8 billion). Taking into account inflation real box office revenues in 2014 were 3.9 times higher than in 2009.

Combined television and radio revenues have more than doubled from 2009-2014 (non-inflation adjusted). Real (inflation-adjusted) revenues for the television industry have increased by 87% during this five-year period.

The factors underpinning the recent growth in film and TV in recent years – the world’s largest population, strong economic growth and rising incomes – should continue to drive the sector in the future.

If the overseas experience holds true, the recent rise in cinema construction in

China could hold the potential to produce other local spillover benefits (e.g., through higher spending in shopping malls associated with multiplex cinemas). However more work needs to be done to establish that these or other spillover benefits hold true in China.

Likewise, despite having some local “hot spots” China’s film and television related tourism sector appears to remain underdeveloped, though the lack of any national data makes it difficult to determine how large such activity actually is. A way forward for regions with less developed film and television tourism may be for film productions to work closely with local tourism authorities to emphasise distinctive local features. In the case of more developed film tourism regions, a focus on integrating film-related tourism with a more diverse range of local activities, which tap into the same basic motivations that drove film related tourism, may be the preferred strategy.

8 Detailed methodology

8.1 Quantifying the direct contribution

The estimates in this report are underpinned by figures published by the State Administration of Press, Publication, Radio, Film and Television (SAPPRFT) in the “Blue Book of China’s Radio, Film and Television” (BBCRFT). The most recent version of this publication was released in July 2015 and provides statistics relating to the 2014 calendar year.

Direct gross output (i.e., revenue) for film and television is based on figures reported in BBCRFT. Home video sales revenue is sourced from Screen Digest. For most film and television sub-sectors GDP is estimated from output by applying GDP-to-output ratios for the “Radio, TV, film and video” sector as reported in the official 2007 China Input-Output tables (the most recent detailed tables available). The exception is home video, where the retail margin from home video sales is converted to GDP using the GDP-to-output ratio for the “Wholesale & Retail” sector, while distributors’ revenue from home video sales uses the ratio for “Radio, TV, film and video”.

The study assumes producers and distributors combined received 43% of film (box office) revenues in 2014. This split is reported by a number of publicly available articles and reports citing industry sources. In 2012 it was widely reported that foreign producers would start to receive a 25 percent share of the box office takings from imported revenue-sharing films – a higher share than before⁴⁵. Given a 43 percent split of the box office for producers and distributors combined, this implies Chinese distributors retain 18 percent of receipts from revenue sharing 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 2014. (Presumably the foreign/domestic split will depend on the relative contributions of foreign and domestic companies to production and distribution costs.)

Employment in television sub-sectors is estimated from data in BBCRFT on television and radio employment.

Data was not available to allow for the measurement of China’s film industry employment or labour productivity (i.e., GDP per employee). Therefore our approach estimates the ratio of film productivity to TV productivity, and then applies this ratio to TV productivity in China (for which we have estimates) to derive film productivity. This calculation was done separately for film exhibition and film production & distribution, as there is clear evidence from studies in other Asian countries that productivity levels differ between the two sub-sectors, with productivity in film exhibition generally being lower.

To obtain the productivity relationships described above figures from the film and television industries in South Korea, Malaysia and Taiwan were analysed. These showed that on average the film exhibition industry is 2.3 times less productive than the television industry (measured by GDP per employee), while film production & distribution is 1.5 times less productive than television. These ratios were used within the study to obtain film industry productivity for China.

No other country will have precisely the same ratio of film to television productivity as China, so it is preferable to base such a ratio on more than one country to smooth out any potential idiosyncrasies and/or irregularities. Alternatively, basing such a ratio on countries drawn from across the world would risk distorting the measure by including markets which might be very different to China’s (e.g., the US and Sweden). As such, South Korea, Taiwan and Malaysia were chosen because they are neighbours of China lying within East Asia and face many of the same economic challenges (representing combinations of emerging and “recently emerged” markets). Effectively, the assumption is that the film and television

⁴⁵ For example, “White House Gets China To Open Market to U.S. Movies”, Reuters, article dated February 2012.

industries in China are more similar to South Korea, Malaysia and Taiwan (and other East Asian countries) than other non-Asian (developed) countries.

Productivity in the home video industry 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).

In the case of taxation, our figures combine knowledge of the country's tax system with estimated industry revenue, profits, and employees' wage income. Taxes included in the estimates consist of employees' income tax, employees' social security contributions, Enterprise Tax and VAT.

For film exhibition (box office) revenues we assume 8 percent of the reported figure is combined sales/VAT taxation. This is based on information from 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).

8.2 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 135-sector China input-output (IO) table for the year 2007⁴⁶ (the most recent detailed tables available). 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, TV, film and video" sector within the IO tables is the closest match to the TV and film 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 level of direct gross output (or revenue) derived from the values reported in BBCRFT to the IO tables. This allows the estimation of indirect and induced effects in the rest of the economy.

8.3 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.

⁴⁶ Source: "Input-Output Tables of China", National Bureau of Statistics of China (2009).

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 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.

Table 8.1: Derivation of gross output multipliers for the film and television industries

Adjustments to gross output multipliers	
Radio, TV, film and video Type I multiplier (unadjusted from IO tables)	2.93
Type I multiplier adjusted for import leakage	2.46
Type I multiplier adjusted for import leakage and double counting (final report multiplier)	2.33
Radio, TV, film and video Type II multiplier (unadjusted from IO tables)	4.77
Type II multiplier adjusted for import leakage	3.71
Type II multiplier adjusted for import leakage and savings	3.08
Type II multiplier adjusted for import leakage, savings and double counting (final report multiplier)	2.91

Source: National Bureau of Statistics of China; Oxford Economics calculations

8.4 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 2014⁴⁷.

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.

For the indirect and induced contributions we applied the average economy-wide gross annual wage⁴⁸ to our estimate of indirect and induced employment in each sub-sector.

The final gross output, GDP and employment multipliers associated with the modelling in the study are reported in Table 8.2.

⁴⁷ National Bureau of Statistics of China.

⁴⁸ National Bureau of Statistics of China.

Table 8.2: Gross output, GDP and employment multipliers (final report multipliers)

	Gross Output		GDP		Employment	
	Type I multiplier	Type II multiplier	Type I multiplier	Type II multiplier	Type I multiplier	Type II multiplier
Film industry (all sub-sectors)	2.33	2.91	2.12	2.71	2.14	2.74
Television industry (all sub-sectors)	2.33	2.91	2.12	2.71	3.36	4.61
Home video industry	2.19	2.73	1.89	2.38	2.27	2.97

Source: National Bureau of Statistics of China; Oxford Economics calculations

8.5 Modelling tax revenues

Tax incomes from the following sources are included in the tax contribution from indirect and induced economic contributions: employees' income tax and social security contributions, VAT and Enterprise Tax. Income tax and employees' social security contributions are based on average contributions per worker in China as estimated by the OECD⁴⁹.

8.6 GDP measure

GDP can either be measured at basic prices or at market prices. The estimates produced in this report are measured using GDP at *basic prices*, which excludes taxes less subsidies on products (taxes on products include VAT and excise duties). Gross Value Added (GVA) is another term for GDP at basic prices.

GDP at market prices is the "headline measure" of GDP used in China and most other countries. GDP at market prices includes taxes less subsidies on products.

49 Taxing wages 2013-2014, OECD (2015).

Europe, Middle East, and Africa

Global headquarters

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

London

Broadwall House
21 Broadwall
London, SE1 9PL
UK
Tel: +44 (0)207 803 1400

Belfast

Lagan House
Sackville Street
Lisburn
County Down, BT27 4AB
UK
Tel: + 44 2892 635400

Paarl

12 Cecilia Street
Paarl 7646
South Africa
Tel: +27(0)21 863-6200

Frankfurt

Mainzer Landstraße 41
60329 Frankfurt am Main
Germany
Tel: +49 69 95 925 280

Paris

3 square Desaix
75015 Paris
France
Tel: +33 (0)1 78 91 50 52

Milan

Via Cadorna 3
20080 Albairate (MI)
Italy
Tel: +3902 9406 1054

Americas

New York

5 Hanover Square, 19th Floor
New York, NY 10004
USA
Tel: +1 (646) 786 1879

Philadelphia

303 West Lancaster Avenue
Suite 2e
Wayne, PA 19087
USA
Tel: +1 (610) 995 9600

Mexico City

Emerson 150, Despacho 802
Col. Polanco, Miguel Hidalgo
México D.F., C.P. 11560
Tel: (52)(55)52503252

Boston

51 Sawyer Rd
Building 2 - Suite 220
Waltham, MA 02453
USA
Tel: +1 (617) 206 6112

Chicago

980 N. Michigan Avenue,
Suite 1412 Chicago
Illinois, IL 60611
USA
Tel: +1 (773) 867-8140

Miami

1090 Oysterwood Street
Hollywood, FL 33019
USA
Tel: +1 (954) 815 0305

Asia Pacific

Singapore

Singapore Land Tower
37th Floor
50 Raffles Place
Singapore 048623
Tel: +65 6829 7198

Sydney

Level 4, 95 Pitt Street
Sydney, 2000
Australia
Tel: +61 (0)2 8249 8286

Hong Kong

30/F, Suite 3112
Entertainment Building
30 Queen's Road Central
Hong Kong
Tel: +852 3103 1096

email: mailbox@oxfordeconomics.com

www.[oxfordeconomics.com](http://www.oxfordeconomics.com)



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