

# THE ECONOMIC CONTRIBUTION OF THE SHANGHAI FILM & TELEVISION INDUSTRY 2012



## About this Report

The Economic Contribution of the Shanghai Film & Television Industry report provides a 2012 snapshot of economic impact and job creation derived from the production, distribution and exhibition of filmed and television content.

As reference, this report also provides certain national level statistical and news information for other sectors of the industry as a backdrop to the growing size and impact of China's media industry overall.

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## I. EXECUTIVE SUMMARY

The Economic Contribution of the Shanghai Film & Television Industry report provides a snapshot of economic impact and job creation derived from the production, distribution and exhibition of film and television content in the market. In 2012, Shanghai's film and television industry is estimated to have contributed:

- CNY 53.3B (USD 8.4B) gross economic output generated by the Shanghai film & television industry
- CNY 14.4B (USD 2.2B) value-added to the Shanghai economy by the film & television industry
- 70,000+ people employed as a result of Shanghai's film & television activities
- CNY 15.2B (USD 2.4B) total labor income generated by Shanghai's film and television industry

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Industry Sector	Gross Output (CNY Million)		Value-Added (CNY Million)		Employment (Persons Engaged)		Labor Income (CNY Million)	
	Direct	Total	Direct	Total	Direct	Total	Direct	Total
Type of Impact								
Film Production	341.8	615.2	170.9	273.4	500	800	146.8	155.6
Film Distribution	164.7	197.6	135.3	216.5	318	476	93.2	102.6
Film Exhibition	1,685.8	3,203.0	1,470.0	1,617.0	4,880	13,176	1,432.9	2,865.7
Television & Broadcast	28,661.5	49,297.8	8,598.5	12,295.8	27,357	57,450	8,032.7	12,049.0
<b>Total</b>	<b>30,853.8</b>	<b>53,313.7</b>	<b>10,374.7</b>	<b>14,402.8</b>	<b>33,055</b>	<b>71,903</b>	<b>9,705.6</b>	<b>15,172.9</b>

As reference, this report also provides certain national level statistical and news information for other sectors of the industry such as home entertainment, internet, etc., as a backdrop to the growing size and impact of China's media industry overall.



## II. BACKGROUND

Shanghai, is one of China's most important major cities, with over 23.4 million people as of 2012. It is also one of four special "provincial-level" municipalities in China (together with Beijing, Tianjin, and Chongqing). The city is a major financial center and the busiest container port in the world. Major industries include finance, retail, and real estate.

According to state owned news agency Xinhua, Shanghai's GDP in 2012 was CNY 2,010.1B (USD 319.1B), up 7.5% over 2011. Per capita disposable income of urban residents was reported at CNY 40,188 (USD 6,380), nearly double China's national average, and up 7.9% year-on-year.

In the context of this report, Shanghai is also regarded as the birthplace of the China's film and modern cinema industry. China's first short film, THE DIFFICULT COUPLE (难夫难妻, Nanfu Nanqi, 1913), and the country's first fictional feature film, AN ORPHAN RESCUES HIS GRANDFATHER (孤儿救祖记, 1923) were both produced in Shanghai. The city's film industry blossomed during the early 1930s, and it remains a major media hub today. Shanghai has produced or has been the setting for many local and international films and television shows. Shanghai Film Group produced and distributed one of the top 10 films of 2012, PLEASANT GOAT AND BIG BIG WOLF 4, with over CNY 166M (USD 26.3M) in box office gross revenues.

Shanghai is also the origin of modern multiplex cinema development in China, dating to the early 2000s, when one of the first modern multiplex cinemas of the current development cycle was opened with nine screens in the Grand Gateway shopping mall complex in the Xuhui District of Shanghai.



### III. FILM INDUSTRY

In 2012, China became the second largest film market in the world, with CNY 17.1B (USD 2.7B) in box office revenues. China's film industry growth has averaged +30% annually since 2004, and many industry observers project that the market's commercial value could rival the United States within the next decade or more. For reference, U.S. box office revenues were USD 10.8B in 2012.

Of China's major urban markets, Shanghai ranked #2 in box office and admissions nationally in 2012. Year-on-year box office and admissions were up 22.2% and 15.8% respectively. While many industry groups considered Shanghai to be in the mature stages of cinema screen development, 2012 results suggest the market still has significant capacity for upside:

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RANK	CITY	CINEMAS	SCREENS	BOX OFFICE (Million CNY)	ADMISSIONS (Million Person)
1	Beijing	120	692	1,611.6	37.8
2	Shanghai	122	583	1,348.7	30.8
3	Guangzhou	70	389	760.7	18.5
4	Shenzhen	75	418	745.8	17.2
5	Chengdu	68	482	595.1	16.6
6	Wuhan	44	287	559.6	16.6
7	Chongqing	86	509	553.9	16.9
8	Hangzhou	32	233	452.1	11.0
9	Nanjing	35	228	376.9	10.1
10	Xi'an	26	163	348.6	9.5



## Shanghai Film Production

Industry Sector	Gross Output (CNY Million)		Value-Added (CNY Million)		Employment (Persons Engaged)		Labor Income (CNY Million)	
	Direct	Total	Direct	Total	Direct	Total	Direct	Total
Film Production	341.8	615.2	170.9	273.4	500	800	146.8	155.6

The production sector of the filmed Entertainment Industry in Shanghai generated total gross output of CNY 615.2M (USD 97.7M) in 2012 with total value-added of CNY 273.4M (USD 43.4M), including CNY 146.8M (USD 23.3M) in salaries paid to labor directly employed by the production sector (500 persons directly engaged).

### *Direct impact*

With reasonable estimation, a single major local feature film shot in Shanghai injects an investment of approximately CNY 50M (USD 7.9M) into the local economy. Both local invested production and foreign film production play important factors in Shanghai's Gross Output contributions.



The nature of the filmed entertainment industry is labor intensive, which leads to immediate employment opportunity. For foreign film companies as example, in addition to core production crews, 100-120 local workers might be employed during a location shoot including such professions as electricians, carpenters, security guards, caterers, drivers, casual laborers, and general administrative employees.

Ancillary services are also required by a film production, such as accounting, medical services, the hiring of equipment and vehicles, costume supply and catering. While the requirements for television production are lesser than that of feature films, the basic principles and scaling apply.

### *Indirect impact*

Shanghai continues to be a popular backdrop and facility for both local and foreign film productions. The indirect impact multiplier (see Methodology) estimates the total economic activity (gross output) generated by location filming including flow-on benefits. In total, CNY 615.2B (USD 97.7B) in gross output is estimated to have been contributed in 2012.

For total employment, every person directly employed on a film production creates a further 1.6 jobs through the multiplier effect in the local economy. Other significant indirect impacts include the upgrade of the production technology; the experience gained by local crews at the foreign film production, which may result in higher future salaries; as well as tourism promotion.



### Notable Issues & News

A joint announcement between the Chinese and U.S. governments in February added a maximum of 14 additional imported revenue sharing film releases per calendar year. According to the agreement, the 14 titles may be of any foreign origin, and must be available in "enhanced format", that is in 3D or large format (such as IMAX).

DreamWorks Animation formed Oriental DreamWorks, a venture with Chinese consortium partners China Media Capital, Shanghai Media Group, and Shanghai Alliance - three entities backed by the city government. The company announced plans to develop a USD 3.1B (CNY19.5B) cultural and entertainment district in Shanghai called "Dream Center", a riverfront complex in Shanghai's West Bank Media Port area. The development will cover six large city blocks, with a concept akin to the Broadway theater districts of New York and the West End in London. Theaters, performance halls, restaurants, shops and an entertainment zone with a "Kung Fu Panda" theme are envisioned.

Walt Disney Company confirmed plans to develop a Disneyland theme park in Shanghai. The park development, 43% owned by Disney, and 57% owned by the Shanghai Shendi Group, will cover a land area of 963 acres at a budget of CNY 24.5B (USD 3.9B), plus another CNY 4.5B (USD 714.3M) for peripheral developments. The development has broken ground, and is scheduled to open in latter 2015.



## Shanghai Film Distribution Sector

Industry Sector	Gross Output (CNY Million)		Value-Added (CNY Million)		Employment (Persons Engaged)		Labor Income (CNY Million)	
	Direct	Total	Direct	Total	Direct	Total	Direct	Total
Film Distribution	164.7	197.6	135.3	216.5	318	476	93.2	102.6

The distribution sector of the filmed Entertainment Industry in Shanghai generated total gross output of CNY 197.6M (USD 31.4M) in 2012 with total value-added of CNY 216.5M (USD 34.4M), including CNY 93.2M (USD 14.8M) in salaries paid to labor directly employed by the distribution sector (318 persons directly engaged).

### *Direct Impact*

Distribution is the process of delivering finished audio-visual goods to market, i.e. films, television programming, home entertainment software, film library operation, and film leasing. The process involves physical distribution and supporting marketing activities such as advertising, publicity and promotions, but excludes retail distribution. Film distribution is directly managed by state-owned enterprises China Film and China Film Huaxia, and implemented through government authorized circuit line distribution companies.



There are two primary circuit line distribution companies based in Shanghai, however Shanghai Media and Entertainment Group controlled groups manage a great majority of the business (see below). Direct employment for the industry is estimated at 318 people, producing CNY 93.2M (USD 14.8M) in labor income.

### *Indirect Impact*

The multiplier for filmed entertainment distribution activity estimates the total economic activity generated by both local and overseas distribution of Shanghai-originated works. Indirect impact is widely contributed outside of Shanghai, including further impact on employment. The multiplier calculation projects that spending in the film distribution sector creates a total economic impact of CNY 197.6M (USD 31.4M) in the Shanghai economy; encompassing both direct and indirect economic impact.

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### **Notable Issues & News**

The dominant player in Shanghai's media industry is Shanghai Media and Entertainment Group (SMEG), whose subsidiaries include film, television, radio, internet, print media and tourism, hospitality, and other culture related industries. Group companies include Shanghai Media Group, Shanghai Film Group, internet media platform Eastday, Shanghai Television & Radio, etc. According to SMEG, 2011 full year group revenues were CNY 19.3B (USD 3.1B).



The Shanghai United Cinema Circuit Line company, one of the nation's largest film sub-distribution companies, ranked second nationally with CNY 1.65B (USD 261.9M) in box office revenues from films it distributed nationwide. See the table below:

Rank	Circuit Line	2012 Box Office (Million CNY)	2012 Admissions (Million Persons)	Growth Rate (Box Office)	Growth Rate (Admissions)
1	Beijing Wanda	2,456.0	58.4	37.6%	43.8%
2	<b>Shanghai United</b>	<b>1,650.4</b>	<b>46.9</b>	<b>26.6%</b>	<b>12.0%</b>
3	China Film Stellar	1,620.2	43.9	17.7%	14.2%
4	Shenzhen China Film South	1,326.3	34.7	22.1%	21.4%
5	Guangzhou Jinyi Pearl River	1,175.1	30.6	38.1%	36.0%
6	Guangdong Dadi	1,105.4	38.0	63.3%	63.7%
7	Beijing New Film Association	826.0	22.1	8.2%	5.4%
8	Zhejiang Times	716.1	19.6	28.6%	26.1%
9	Sichuan Pacific	603.2	16.5	28.9%	21.2%
10	Zhejiang Hengdian	567.7	17.6	61.8%	61.7%
Subtotal		12,046.3	328.2	30.7%	28.1%
National Gross		17,073.0	469.3	30.2%	27.5%

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Shanghai is also home to a second, smaller circuit line film distribution company, Shanghai Ever Shining, which earned CNY 154M (USD 24.4M) in box office revenues distributing to about 20 cinemas in eight cities.



## Shanghai Film Exhibition

Industry Sector	Gross Output (CNY Million)		Value-Added (CNY Million)		Employment (Persons Engaged)		Labor Income (CNY Million)	
	Direct	Total	Direct	Total	Direct	Total	Direct	Total
Exhibitor	1,685.8	3,203.0	1,470.0	1,617.0	4,880	13,176	1,432.9	2,865.7

The Shanghai film exhibition, aka cinema, sector generated total gross output of CNY 3.2B (USD 507.9M) in 2012 with total value-added of CNY 1.6B (USD 267.6M), including CNY 1.4B (USD 227.4M) of salaries paid to labor directly employed by the film exhibition sector (4,880 persons directly engaged). When applying the multiplier effect, such direct employment creates total employment for 13,176 people.

### *Direct Impact*

Film exhibition is the business of displaying filmed entertainment content in a fixed venue at traditionally the earliest opportunity or “window”, prior to the same content being available in other media. Exhibition is marked by heavy upfront capital requirements and extended commitments in terms of real estate contracts and investment recoupment periods. Direct impact of gross output usually includes the revenue from displaying the content (i.e. box office), self-generated revenue and benefit from other related business in the premises, (i.e. concession in cinema), advertisement income, etc.



Direct Impact on employment includes people who work directly for the content displaying sector; in the venues related to the business administration, operations and management. As Shanghai is a large market, cinema venue sizes tend towards larger staffs; approximately 4,880 people were directly engaged by employment, generating CNY 1.4B (USD 222.2M) in labor income.

### *Indirect Impact*

The multiplier adopted to estimate the total economic activity generated by the exhibition sector, including flow-on benefits, reflects spending in the exhibition sector that created total economic impact of CNY 3.2B (USD 507.9M). This figure encompasses both direct and indirect economic impacts.

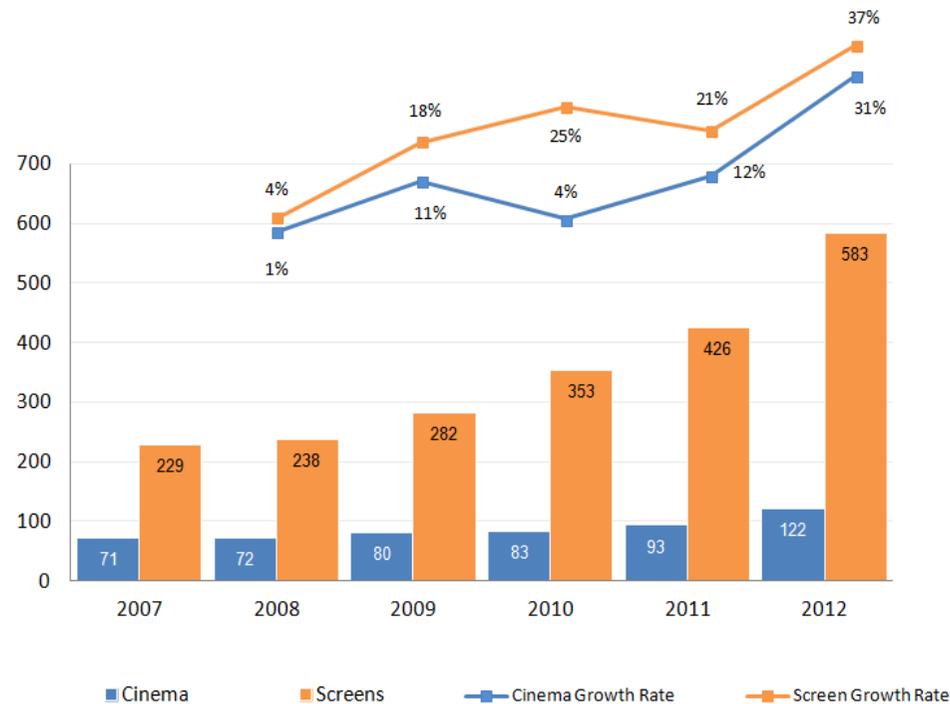
The development and construction of new cinemas brings about additional business activities. For example, the purchase of foreign-sourced new cinema equipment and furniture leads to an increase in revenue for the relevant logistics company. As the majority of new cinemas are located in shopping malls, indirect benefits include increased mall visitor count and incremental retail sales outside the cinema environment.

### **Notable Issues & News**

In 2012, China reached 13,000+ cinema screens nationally by adding 3,832 new screens over the year; an average of 10.5 new screens per day. About 91.5% of screens are 2K digital projection installations, and most are 3D capable.



In Shanghai, there were 29 new cinemas with 157 screens added over the 2012 year. As the birthplace of the modern multiplex cinema in China, Shanghai is also arguably its most mature market as well; cinema and screen growth marginally under-indexed the national average growth rates of 30% and 41% respectively, however concurrent box office growth suggests the market has continuing upside as previously mentioned. See below:





#### IV. HOME ENTERTAINMENT

In a recent report jointly commissioned by the China Film Distributors & Exhibitors Association and the Motion Picture Association estimated that China's 2011 total income of DVD, Blu-ray, and VCD sales and rentals reached just over CNY 350M (USD 55.6M). As a component of total media industry value, a relatively marginal contribution. Because of the complex nature of accounting for home entertainment revenues, little information is generally published on this sector. However, the potential for this sector in the media industry remains decidedly large.

As an illustration, take the U.S. market as example, where retail sales and rental of DVDs and Blu-ray made up nearly 55% of total film industry direct revenues in 2012. While there are many factors that make the markets different and comparisons difficult, if a mature home entertainment market in China contributed in like fashion to the US market, it might lead to another CNY 3.6B (USD 574.8M) in direct revenues in China's home entertainment industry. By extension, an estimate of Shanghai's home entertainment market potential might be projected as high as CNY 140M-152M (USD 22.2M-24.1M).

##### **Notable Issues & News**

The first home video circuit line, 'Le Zhai', was established by local group NOVEL SUPERTV. The circuit line library includes more than 2,000 high quality authorized copyright international films, and is reported to have nationwide coverage over 10 provinces. It provides audience with 24/7 programming with various movies and adds 100 new hours of content every month.



## V. TELEVISION INDUSTRY

Industry Sector	Gross Output (CNY Million)		Value-Added (CNY Million)		Employment (Persons Engaged)		Labor Income (CNY Million)	
	Direct	Total	Direct	Total	Direct	Total	Direct	Total
TV Industry	28,661.5	49,297.9	8,598.5	12,295.8	27,357	57,450	8,032.7	12,049.0

The television broadcasting sector in Shanghai generated an estimated total gross output of CNY 49.3B (USD 7.8B) in 2012 with total value-added of CNY 12.3B (USD 2.0B), including CNY 8B (USD 1.28B) in salaries paid to labor directly employed by the broadcasting sector (27,357 persons directly engaged). By applying the multiplier effect, the sector’s direct employment creates total employment of 57,450 people.

### *Direct Impact*

Activities include the production of television programming, importing foreign programming, generated advertising and subscription-based income, engaged labor and the selling of electronic set-top boxes. TV stations in Shanghai are state operated.

Television advertising revenues are estimated to have reached CNY 9.9B (USD 1.6B) in 2012, representing 34.5% of the year’s total advertising expenditures in Shanghai.



### *Indirect Impact*

Among various sectors of filmed Entertainment Industry, television broadcasting enjoys a comparatively high multiplier effect on employment because of its labor-intensive nature.

Applying the multiplier effect delivers a total economic contribution of CNY 49.3B (USD 7.8B) on Shanghai's economy. An example of the sector's indirect economic impact is the additional hardware and network-related purchases required by consumers for upgrading television equipment due to the introduction of digital and Internet-based broadcasting.

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### **Notable Issues & News**

By May 2012, there were 2,954 TV broadcasting and radio stations in China. The industry is dominated nationally by state owned group Chinese Central Television (CCTV). 2012 full year national GDP contribution of CNY 313.5B (USD 49.8B) came from television industry, 15.38% increase than 2011.

### Cable

Cable television users in China reached 214 million in 2012, of which two thirds were estimated to be digital cable users. There were 506 TV dramas and 17,703 episodes produced for the year; increases of 7.9% and 18.5% year-on-year respectively. Cable television revenues contributed CNY 65.6B (USD 10.4B) to the national GDP for the year.



For Shanghai, there were 6.3M cable users in 2011 (most recent full year report), of which 41.6% were digital users – a notably higher penetration of digital than the national average. If growth estimates for 2012 remain on the trend line, it is forecast to 6.9M cable users, of which 3.5M will be digital users.

#### Satellite

National satellite television revenues reached CNY 24.1B (USD 3.8B) in 2011. Little information is reported at the regional levels, and we include this estimate for background information purposes only.

Of note during the year, in a move to curb programming deemed "excessively entertaining" SARFT called for restrictions on certain types of television programs dealing with controversial topics such as marital troubles, matchmaking, overt talent and variety shows, and reality programming not meeting certain standards of ethics and morality.

The order affected mainly the country's 34 satellite television stations – and replacement programming was primarily news and suitable cultural programming. Advertising revenues by satellite providers were said to have suffered consequently during the year. In overview however, television revenues in China have grown by almost 2.5x over the most recent five years reported by official sources.



## VI. INTERNET MEDIA

Total Chinese internet user population reached 564M people in 2012, with web media users an estimated 70% (450M). The scale of market penetration in China is very high, and many people are consuming media entertainment from the internet as a primary platform. Primary reasons include cost, however this platform has also historically been relatively un-regulated (or unenforceable) given the nature of the global internet platform. While theatrical and television industries face a gauntlet of regulations designed to manage the quality of content available to the public, highly popular "pop culture" programming is widely available on the computer screen connected to broadband.

Little is reported or published regarding the quantification of the internet media industry in China, much less at the regional levels. This information is included in this report as background reference.

### Notable Issues & News

In 2012 news, US-listed Chinese online video companies, Youku and Tudou, announced a merger through a 100% stock-for-stock transaction. The combined entity will become a larger and more vertically integrated online content provider. Announced initiatives of the merged entity include production of micro-movie content, and proactive collaborations with local television stations seeking broader business opportunities.



## VII. GOVERNMENT INITIATIVES & SUPPORT

### Shanghai Fine Film Supportive Fund

In 2011, the fund was established to encourage local film making talent to produce films of high quality. It provides financial aid of up to CNY 25M (USD 4.0M) each year. The fund also helps to build and renovate cinemas in suburban areas - including the upgrade to digital projection systems – up to a maximum CNY 15M (USD 2.4M) per year. The balance of funds goes primarily to the Shanghai International Film Festival, a platform to promote film industry development and enhance cooperation with the rest of the world.

### Shanghai International Film Festival

The Shanghai International Film Festival (SIFF), founded in 1993, is China's first A-category international film festival. The festival promotes the local and national film industries, and encourages domestic and international cooperation in filmmaking.

### Shanghai Television Festival

Shanghai Television Festival (STVF) established in 1986, is a similar platform for local and national industry showcase in television. Programming includes an awards event, television market, new media & equipment market, and various forums, seminars, and information exchanges.



## China Network Audio-Visual Industry Forum

China Network Audio-Visual Industry Forum is the only nationwide forum organized by SARFT to enhance the audio-visual industry. Held every year in December in Shanghai, the forum includes programming for the development of the Internet audio-visual industry; Internet TV, IPTV, mobile TV, and Internet broadcasting networks.

## Internet Audio Support Fund

Since 2011, the Shanghai government has allocated CNY 10M (USD 1.6M) annually to support the development of the internet audio industry.

## China Network Audio- Visual Industry Base

SARFT signed a cooperation agreement with the Shanghai Municipal Government to open a national-level Network Audio-Visual Industry Base in Minhang District, Shanghai. The planned area is 400,000 square meters with an announced investment of CNY 3.5B (USD 555.6M). The government ambition is to build five listed companies with a combined market capitalization of more than CNY 5B (USD 793.7M) and expect a total output exceeding CNY 10B (USD 1.59B) within the next five to ten years.

## Shanghai Culture Development Foundation

The Foundation was launched in 1986 as one of the first regional organizations of this kind in China. Since its inception, it has raised funds from society through various channels to promote cultural activities.



## VIII. INDUSTRY DEVELOPMENT

### Industry Commercialization and Globalization

Over a relatively short period of time, China has become one of the most important global film and television markets in both market scale and growth terms. China's massive population, growing consumer class, media infrastructure development, and the professionalization of the content creation, distribution, and marketing sectors have combined to create what many would call a new golden age for Chinese media.

While much attention is focused the growth of China's domestic markets, there is also interest and capability in developing Chinese industry and content for a global audience. Wanda's recent acquisition of U.S. based cinema operator AMC Entertainment, and public statement of developing global capabilities in both cinemas and film production sectors is one such example.

Broadly speaking, China's growing profile and commercial heft on the global stage also enhances outbound opportunities for Chinese entertainment content; and the motivations and goals are multi-faceted in economic, political, and cultural terms. As reference, the growing number of co-productions by Chinese film producers in recent years. Co-productions have played a critical role in the expedited development of China's creative content industries, encouraging the use and development of Chinese stories, talent, and settings, as well as local technologies, film crews, etc.. Chinese language films, many of them co-productions, are producing significant results, and routinely represent 50% and more market share of China's annual box office revenues.



The number of reported co-productions that have achieved a national level theatrical release has increased steadily over the most recent five years. Our estimates are as follows:

Year	Major Co-Productions
2008	32
2009	21
2010	41
2011	56
2012	63

While many of China's most commercially successful co-productions have been with Hong Kong based partners, the number of non-Chinese co-produced films has also been on the rise. The percentage of Hong Kong partner co-productions has steadily declined over time; from approximately 83% in 2008 to about 67% in 2012.

As Chinese creative industry resources and skills are developed and honed, we expect the development of international markets to become an increasingly significant factor in the main business strategies of local groups seeking natural expansion and growth.



## **Development and Protection Media Content**

At the global level, a significant amount of media and public attention has been placed on both the development and protection of intellectual property rights (IPR). With China's impressive film and television media industry growth, this topic has also become important from both local and international perspectives.

In recent years there has been little quantitative reporting on the topic given its intricacies and the complex implications for stakeholders in the industry. In any case, an interest in properly developing and protecting intellectual property would seem a common goal that is shared by all in the long term.

Piracy, or film theft, is widely regarded as the greatest limiting factor to the development and growth of the film and television industry in China - as well as for the global industry generally - as it affects foreign and domestic stakeholders alike worldwide.

At the macro level, and over the most recent 10 years, the focus of film and television IPR protection initiatives has transitioned from hard goods – such as DVD and Blu-ray disks – to illegal download, as broadband internet penetration reached critical mass in the market.



## Motion Picture Association Efforts

In partnership with local government, commercial, and other groups, the U.S. Motion Picture Association has made significant efforts that support the intellectual property of all content creators, both locally and internationally. Ongoing efforts and proposals in the market include the following:

- Lowering the criminal threshold for copyright crimes.
- Crack down on the large and growing number of rogue websites using third-party software or platforms to provide unauthorized copyrighted content.
- Amend the Copyright Law and related Judicial Interpretations to close the loopholes concerning “safe harbor” provisions.
- Emphasize the seriousness of hard goods piracy on China’s leading domestic e-commerce sites. The MPA signed an MOU with Taobao in 2012 to clean up unauthorized copyright products on its open e-commerce platform, however there are still many standalone websites targeting overseas customers with counterfeit optical disc product, especially box sets of popular TV series.
- Camcording continues to be a major problem in China. Forensic matches of Hollywood movies to Chinese theaters increased in 2012.



## IX. METHODOLOGY & APPROACH

This study analyzes the direct and indirect economic impacts generated by the film and television entertainment industries (Entertainment Industry) to the city of Shanghai. We apply four widely accepted components of economic value to represent a total economic contribution.

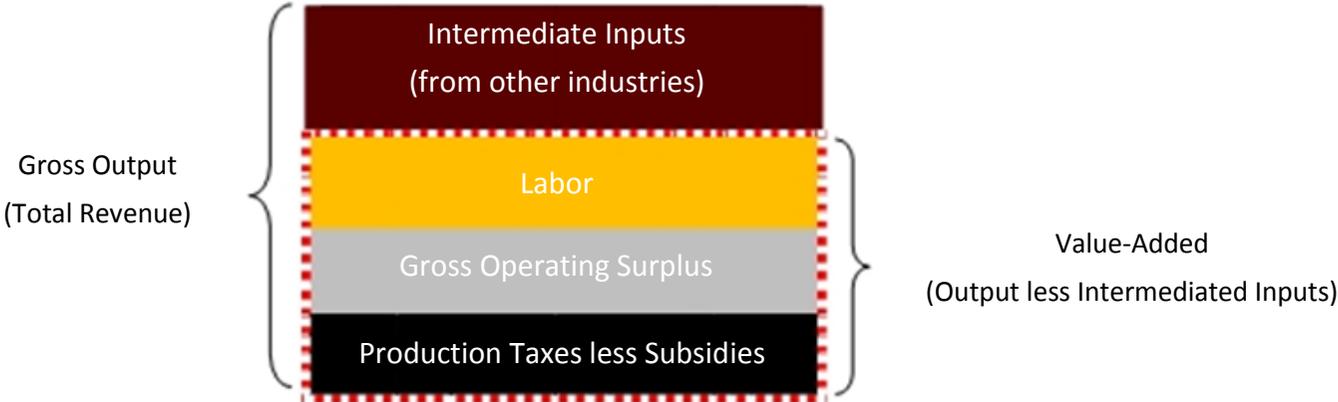
- Gross Output - the total value of goods and services supplied by all industry participants attributed to film and television industry activity;
- Value Added - the value of output generated by industry participants, as measured by income from factors of production;
- Employment - the number of workers employed by industry entities;
- Labor Income - a subcomponent of Value Added, represented by the value of output generated by industry participants' direct labor inputs.



Gross Output

Direct gross output is the total of sales for goods and services provided by the firms and individuals operating in the Entertainment Industry. Gross output includes fees, commissions, margin on resale of goods and rentals received, etc. The value of output is equal to the value of all goods and services used as inputs to generate output, Intermediate Inputs, plus the value of payments to labor and capital in the Entertainment Industry.

The following illustration provides a summary of the components up Gross Output; the sum of Value-Added and Intermediate Inputs. Value-Added can be calculated by totalling the primary factors of production, labor (i.e. salaries) and capital.





## Value-Added

Value-Added is equal to the value of output generated by the industry's factors of production, i.e. labor and capital. It is the difference between the value of Gross Output and the cost of the Intermediate Inputs used in the production process. The sum of Value-Added across all industry participants in the economy equals gross domestic product. A simple equation to express this is:

$$\text{Value-Added} = \text{Gross Output} - \text{the cost of Intermediate Inputs}$$

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## Employment

Employment, as a measure of activity, determines the number of workers engaged in the Entertainment Industry.

## Labor Income

Labor income is a subcomponent of Value-Added. It is the value of payments made by the Entertainment Industry to its labor inputs. This is measured by summing total salary and wages payments to those employed within the Entertainment Industry.



## Economic Contribution

Economic contribution studies measure the production and costs of an industry and their impact on a given economy. This study measures the direct consequences the Entertainment Industry has on gross output that is generated from business activity, economic value-added, salaries and labor.

Indirect economic contribution is generated when the Entertainment Industry purchases goods and services from other suppliers in the course of producing its own output. In other words, it is a measure of the total additional contribution the Entertainment Industry makes over and above its direct impact. The calculation of total economic impact is the sum of direct and indirect impacts.

### *Direct Impacts*

Direct Impacts include the sales revenue and operating expenses incurred in the business activities that can be specifically attributed to the Entertainment Industry. For example, a television producer employs a crew for producing a film which he then sells to a broadcaster.

### *Indirect Impacts*

Indirect Impacts occur when there are changes in the level and value of sales for suppliers of goods and services to the Entertainment Industry. For example, when a producer/theatrical distributor orders a digital film print, it generates greater demand for digital drive materials which consequently produce demand for electricity by the digital drive company, etc.



### *Multiplier Effects*

Indirect Impacts are collectively measured as a result of multiplier effects. When projecting the contribution an investment makes, economists use data on Indirect Impacts to derive a multiplier which can then be applied to the Direct Impact in calculating Total Impact. In essence, the multiplier shows the relationship between direct and total economic impacts.

### *Leakage*

When the value chain of the Entertainment Industry extends outside the Shanghai economy, the net impacts of the industry are not be accrued to Shanghai only. In this case, there are economic effects where funds “leak” out of money spent on purchases, to pay taxes, to purchase goods or services outside Shanghai.

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### **Vertical And Horizontal Approaches**

Vertical and horizontal approaches are used to define the Entertainment Industry. A vertical approach places activities into different stages in a value chain; i.e. from an idea’s conception, through its distribution and to consumption. Horizontal boundaries measure what type of output is measured consistent with goods and services for other sectors.



## Vertical Approach - Stages in a Value Chain

The estimation of value can be broken into four sectors:

- Film and television production
- Film and television distribution
- Television broadcasting
- Film exhibition

Film and television production: production involves the activities of development, pre-production, principal photography and post-production. Post-production includes editing, audio & visual effects, computer graphics, and animation; developing, processing and printing; captioning and subtitling; film and video transfers and duplication.

Film and television distribution: Distribution delivers and markets filmed entertainment content to customers but excludes retailing.

Television broadcasting: the distribution of programming as performed through media such as television (terrestrial, cable/satellite, pay/subscription and video-on-demand) and the Internet (IPTV).

Film exhibition: Film exhibition is the display of a filmed entertainment product to the public at a fixed location, such as a cinema or film festival.



## **Horizontal Approach - Type of Output**

The types of content output adopted in this study include the following key components of the Shanghai Entertainment Industry:

- Feature films and short films;
- Television programs;
- Television commercials

Although the production of television commercials is included in this study, note that services from advertising agencies input is excluded. Advertising agencies provide services over multiple media and the statistics provided by the Census and Statistics Department do not provide a relevant break down. Television and film merchandising income is also not included in this report's scope.

These limitations suggest that the actual impact of the industry is larger than is estimated and described in this study. The economic impact derived by the approach in this study is therefore a conservative estimation.



## Multiplier Effects

Data from Indirect Impacts are used to calculate multiplier effects which are applied to Direct Impacts to calculate Total Impacts. As there is no publicly-available precedent of multipliers used in Shanghai, the corresponding figures being used, to the best of the research team’s knowledge and with reasonable assumption, make reference to published multiplier effects from other developed countries’ filmed entertainment industries. The following is the range of multipliers that apply to the four main economic components under this study:

	Gross Output	Value Added	Employment	Labor income
Film Production	1.8	1.6	1.6	1.0
Film Distribution	1.2	1.6	1.5	1.1
Exhibitor	1.9	1.1	2.7	2.0
TV & Broadcast	1.7	1.5	1.5	2.1

## Employment

Normally employment is expressed as the number of Full Time Equivalents (FTE) employees and is reported by official statistics. However, information on FTEs is not collected or published in Shanghai. Rather, data related to “persons engaged” as provided by the Shanghai Municipal Human Resources and Social Security Bureau is used for the purpose of this study. According to the bureau, “persons engaged” is defined as individual proprietors, partners, full-time salaried personnel, working directors of limited companies and part-time employees.



## Taxation

Business taxes for the city of Shanghai are as follows:

- Business Tax: 3-5% of turnover;
- Corporate Tax: 25%;
- Goods and Services Tax: 0%;
- Individual Tax: Local employees are taxed on the basis of the balance of their monthly income after deducting their social benefits contribution, a standard deduction of CNY 3,500 (USD 555.6) and then applying the progressive tax rate as shown in the table below. The employer is obliged to withhold the full tax amount and submit the taxes to the appropriate Chinese authorities on behalf of its employees.

Tax Bracket	Tax Rate	Deduction
Less than 1,500	3%	0
1,501 - 4,500	10%	105
4,501 - 9,000	20%	555
9,001 - 35,000	25%	1,005
35,001 - 55,000	30%	2,755
55,001 - 80,000	35%	5,505
Over 80,000	45%	13,505



## CNY

All figures and amounts showed in this study refer to CNY. If any, calculations with respect to exchange rates are performed using an average 2012 exchange rate as sourced from the published rates of a local bank.

### **Use of this Report**

This report has been prepared solely for the purposes stated herein. Data and information utilized in the preparation of The Economic Contribution of The Shanghai Film & Television Industry 2012 report includes publicly available sources, thus no audit was conducted regarding the various government or other organizations that have provided input either directly or by publication. All information utilized is deemed reliable, but there is no guarantee of accuracy nor completeness. This report includes estimations and is therefore intended for general guidance only. Statements and opinions expressed are made in good faith, and based on information available as of the date of this report.

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## APPENDIX

### Report Data & Information Sources

Sources of data and information utilized in the preparation of the report include, but may not be limited to the following:

- Shanghai Statistic Yearbook 2012
- National Bureau of Statistics of China
- Shanghai Municipal Human Resources and Social Security Bureau
- Shanghai Municipal Administration of Culture Radio Film and Television
- The State Administration of Radio Film and Television
- Shanghai Taxation Bureau
- Annual Report on Development of China's Radio, Film and Television 2012
- Chinese Film Market Review 2012
- The Research Report on Chinese Film Industry 2013
- Annual Report of China's Network Audio-Visual Industry Report 2012
- Annual Report of Shanghai's Network Audio-Visual Industry Report 2012
- The Economic Contribution of the Film and Television Industries in China 2011-by Motion Picture Association
- Overview of China Film Market 2011 by Italian Trade Commission
- China Internet Network Information Center

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