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Determinants of Corporate Value in the Film and TV Enterprises: Evidence from the NEEQ Market in China

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Abstract

The purpose of this study is to identify the factors and assess the impact of factors influencing variation in the firm values of the film and television companies in the National Equities Exchange and Quotations (NEEQ) market. We propose a framework for the relationship between firm value and financial factors, non-financial factors, and industry-specific factors. The study employs 88 selected film and television companies in NEEQ market from 2013 to 2018. Hypotheses were tested using fixed effect regression model. The results show that all financial factors (leverage, asset utilization, growth ability), non-financial factors (equity concentration, firm size, established time), and industry-specific factors (intellectual capital) have a significant impact on the enterprise values of film and television companies in NEEQ market, but governance efficiency, star power, production capacity are not significantly related to the enterprise values.

Keywords: NEEQ, Film and Television Companies, Firm Value

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ปัจจัยกำหนดมูลค่ากิจการในบริษัทภาพยนตร์และโทรทัศน์: กรณีศึกษาจากตลาด NEEQ ในสาธารณรัฐประชาชนจีน

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บทคัดย่อ

การศึกษานี้มีวัตถุประสงค์เพื่อระบุปัจจัยและประเมินผลกระทบของปัจจัยที่มีอิทธิพลต่อมูลค่ากิจการของบริษัทในกลุ่มอุตสาหกรรมภาพยนตร์และโทรทัศน์ในตลาด National Equities Exchange and Quotations (NEEQ) ในสาธารณรัฐประชาชนจีน การศึกษานี้ครอบคลุมการวิเคราะห์ความสัมพันธ์ระหว่างมูลค่ากิจการกับทั้งปัจจัยทางการเงิน ปัจจัยที่ไม่ใช่ปัจจัยทางการเงิน และปัจจัยเฉพาะของกลุ่มอุตสาหกรรม โดยกลุ่มตัวอย่างประกอบด้วยบริษัทภาพยนตร์และโทรทัศน์จำนวน 88 บริษัทในตลาด NEEQ ตั้งแต่ปี พ.ศ. 2556 ถึง พ.ศ. 2561 โดยใช้การวิเคราะห์สมการถดถอยแบบ Fixed Effect ผลการวิจัยแสดงให้เห็นว่าทั้งปัจจัยทางการเงิน ในส่วนของอัตราส่วนการก่อหนี้ การใช้สินทรัพย์ความสามารถในการเติบโต ปัจจัยที่ไม่ใช่ปัจจัยทางการเงิน ได้แก่ การกระจุกตัวของส่วนของผู้ถือหุ้น ขนาดของกิจการ อายุของกิจการ และปัจจัยเฉพาะของกลุ่มอุตสาหกรรม อย่างทุนทางปัญญามีผลกระทบอย่างมีนัยสำคัญต่อมูลค่ากิจการของบริษัทกลุ่มนี้ในตลาด NEEQ แต่ประสิทธิภาพการกำกับดูแล อันดับความนิยมของดารา และกำลังการผลิต ไม่ส่งผลต่อมูลค่ากิจการ

คำสำคัญ: ตลาด NEEQ, บริษัทในกลุ่มอุตสาหกรรมภาพยนตร์และโทรทัศน์, มูลค่ากิจการ

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1. Introduction

With the rapid development of new media, Chinese film and television dramas have entered the era of multimedia communication, and the development of online dramas has become a new profit growth point for TV drama production companies. The film and television companies in NEEQ market has also become the new investee of the capital market. There were various policies to support the cultural sector since 2014. Meanwhile, production of Chinese online dramas began to explode. Table 1 shows the number of Chinese online dramas reached 205 in 2014, reaching the highest number in 2016. With the increase of online video users, as an important category of video content production, the attention and influence of online dramas have been increasing.

Table 1: The Trends of Chinese online drama and online video users in 2013 to 2018

Year	Number of online dramas	The scale of online video users (million people)
2013	50	2100
2014	205	2940
2015	379	4610
2016	349	5140
2017	295	5650
2018	283	6120

Source: https://d.qianzhan.com

For small and medium-sized film and television companies, the NEEQ market provides them an alternative doorway for entering the capital market, as well as attractive transfer procedures, easier access to bank loans, and help to enhance the corporate brand image and other benefits. This provides the company which focuses on specialized product areas with more exposure to capital, opportunities for development and growth, and is more vulnerable to the attention of venture capital and private equity agencies. The added value of the intellectual property of these film and television products is very high, which makes their value uncertain. And only a few scholars by empirical methods to analyse influencing factors on firm value of film and television's company in the NEEQ market.

The objective of this paper is to identify factors influencing variation of firm value. We propose hypotheses that associates these variables with firm value. Then, we assess the impact of factors on film and television's firm value. Finally, we propose the guidelines for investors in evaluating the film and television's companies.

2. Literature Review

2.1. Firm value

Firm value is an economic measure of a firm's performance which reflects the worth of the entire business (Grossman & Stiglitz, 1977; Sarma & Hanumanta, 2012). Corporate value is an important indicator for investors because it can help investors judge the overall situation of the company.

Financial statements: They are the most common and most applicable traditional indicators based on net profit. Return on assets (ROA) has been used as a dependent variable in many papers: Liargovas and Skandalis (2008), Weijiao (2016), and Jishen (2017). There are many papers that also use return on equity (ROE) as a dependent variable: Abor (2005), Yu-Shu, Yi-Pei, and Chu-Yang (2010), and Cuong and Canh (2012). In the study of the performance of China's media industry, ROA can be widely used because it can measure the utilization of the company's total assets, and ROE can measure the company's utilization of owner's equity (Hanqing & Jun, 2016). ROE is the truest reflection of the shareholder's wealth. It reflected the level of returning that investors can obtain after investing in assets. Compared with other single financial indicators, the ROE is more representative of the fundamentals of the media company and is the most appropriate indicator (Wenshi, 2018).

Market value: Anandhi, Sundar, and Benn (1999) used Tobin's Q ratio to measure the firm performance, they researched the relationship between IT investment and enterprise value through US data studies from 1988 to 1993. They believe Tobin's Q is a better method to capture the firm's future performance potential. Javed and Iqbal (2007), Ying and Jiayin (2014), and Panpan (2018) used Tobin's Q as firm value. But the listed companies on the NEEQ market lack liquidity. On the one hand, only 30% of the company's stocks have been traded. On the other hand, the price changes of these stocks are also very small. Therefore, the growth rate of the NEEQ market is limited (Liu & Xu, 2017). Juanjuan and Tiancai (2014) concluded that the liquidity of the NEEQ market was lower than any other securities markets, the stability of the liquidity risk value was poor, and the risk characteristics was significant.

Totally, China's emerging securities market is still in the development stage and the market is volatile. The stock price of NEEQ market may not truly reflect the value creation ability of the enterprise. So, using Tobin's Q values will bias the research results. Whether the Tobin's Q can truly reflect the company's level in stock market has yet to be considered (Xinyue, 2016).

Income method: Economic Value Added (EVA) method is more fully reflects the exact business situation of the enterprise compares with the indicator of accounting profit. Therefore, this method is widely used in the evaluation of the performance of state-owned enterprises (Bingmei & Suhuan, 2010). Lehn and Makhija (1996), Dodd and Chen (1997), and Farsio, Degel, and Degner (2000) believed that EVA can explain changes in company value, However, Xinyue (2016) considered EVA as a suitable indicator to measure corporate value in culture media companies. But in NEEQ market, the EVA method needs to adjust the matter, the process is complicated, and the adjustment process is prone to a lack of objectivity, so the EVA method is excluded (Wenshi, 2018).

2.2. Influencing factors of firm value

2.2.1. Financial factors

Leverage: Abu-Rub (2012) analysed the fiscal data of 28 companies listed on the Pakistan Stock Exchange from 2006 to 2010, including different types of companies such as banks, insurance and general listed companies. His research shows that leverage is positively related to corporate performance. A study by Sogorb-Mira (2002) based on data from Spain's 6,482 SMEs from 1994 to 1998, they explained that SMEs with greater development potential will be as indebted as possible and have more efficient use of funds obtained from debt. Although the value of the enterprise may be inversely proportional to the debt ratio in the short term, it is still proportional to the long term. In China, Qiu (2013), and Yu (2013) concluded that the impact of asset-liability ratio on the operating performance of listed companies in the radio, film and television industry is negative. Excessive liquid assets of enterprises may affect the profitability of enterprises. In diverse industries of Chinese listed companies, the relationship between leverage and corporate value or operating performance is negatively correlated (Naiping, Wenjuan, & Wei, 2013; Mou & Wanrapee, 2014).

Asset utilization : Kennedy and Johnson (2003) analysed the impact of total asset turnover on stock returns using stock samples from LQ 45 Index of BEJ from 2001 to 2002. The study found that total asset turnover has a positive impact on stock returns. Wahla, Shah, and Hussain (2012) empirical showed that by obtaining data on companies listed on the Karachi Stock Exchange from 2008 to 2010, control variable (asset turnover) did not have any significant impact on Tobin's Q. According to the empirical results of Yanzhen (2016), and Jingjing (2017), asset utilization is positively correlated with corporate value in asset-light companies or film and television companies in China. The faster the company's total asset turnover, the higher the efficiency of asset utilization, and the better the company's performance.

Growth ability: Abor (2005) conducted empirical research on GSE listed companies for five years (from 1998 to 2002) and concluded that companies with higher growth opportunities usually have higher profitability. Javed and Iqbal (2007) also concluded that growth (average sale growth) and company value have a positive relationship. However, Cuong and Canh (2012) showed growth rate of operating sales are shown to have no significant effect on firm value by collected data from SEAs listed on two Vietnam's stock exchange markets from 2005 to 2010 and several other unlisted seafood processing enterprises in Vietnam. In China, Jianping (2014) believed that the growth ability mainly depends on the year-on-year growth rate of the media company's operating income, which is a key data to measure the strength of competitiveness. Jingjing (2017) and Panpan (2018) studied the factors affecting the value of Chinese culture media listed companies including growth ability. There is a positive correlation between corporate development (net profit growth rate) and business performance in small and medium company listed on NEEQ market (Jishen, 2017).

2.2.2. Non-financial factors

Governance efficiency: Black, Love, and Rachinsky (2006b) used time-series data from Russia for 1999 to 2006, finding an economically important and statistically strong correlation between corporate governance and market value. Black, Jang, and Kim (2006a) found that there is a positive correlation between corporate governance and corporate value. They analysed data from 515 firms on the Korea Stock Exchange in 2001 and concluded that the firm with higher corporate governance capabilities have better corporate value. In China, Ying and Jiayin (2014) concluded that the shareholding ratio of executives is negatively correlated with firm value in culture media companies. This shows that when the shareholding of senior executives is high, it is possible to control the board of directors, thereby harming the value

of other investors. Xuezhen and Yuan (2017) revealed a positive correlation between the shareholding ratio of executives and the value of enterprises with impact on the financial companies listed on NEEQ market.

Equity concentration: Berle and Means (1933) proposed that the concentration of equity is positively related to corporate performance in America. When large shareholders control equity, they can obtain more and cheaper corporate governance information, thereby reducing the costs of shareholder supervision and management, and reducing the liquidity of equity. And there are difficulties in the transfer of large shareholders' equity, which makes the company's performance closely related to the interests of the majority shareholders. As large shareholders would play an important role in increasing the company's stock price (Shleifer & Vishny, 1986). Fama and Jensen (1983) proposed the manager's defend hypothesis and concluded that the equity structure is negatively related to corporate value. They believed that the lack of effective external constraints on equity concentration could easily cause managers to defend the controlling shareholder and reduce corporate value. In China, Hongxia (2017) using panel data of NEEQ listed companies from 2014 to 2016 got the same conclusion, when the company appropriately increases the shareholding of the largest shareholder, the company's performance will be improved. But Yanzhen (2016) and Wenshi (2018) proved that the more concentrated the equity of an asset-light company, the worse the company's value. Therefore, media listed companies with low equity concentration should reasonably increase their equity concentration.

Firm size: Beatty and Ritter (1986) proposed that the risk and uncertainty can be measured by firm size. The smaller the size of the enterprise, the higher the risk and uncertainty, and the higher the under-pricing of new shares. Javed and Iqbal (2007), Jingjing (2017), and Jishen (2017) concluded a positive correlation between firm size and firm value or business performance. But some scholars to research that the company size is a negative correlation with firm value. For example, Ghazali (2010) using data from the year 2001 of 87 non-financial listed companies in Malaysia, reported that there is a negative relationship between firm size and Tobin's Q. There is a limited negative relationship between firm size and firm value in the United Kingdom for the period 1999 to 2008. Al-Najjar and Anfimiadou (2012) explained by the fact that small firms might have higher value than large ones.

Establishment time: According to Ruekert, Walker, and Roering (1985), enterprise or organization characteristics are split into establishment time, environmental characteristics, type and size. Zeffane (1989) concluded that the establishment time of an enterprise is inversely proportional to the corporate performance, because the longer the establishment time, the higher the degree of organizational bureaucracy and the worse the corporate performance. However, Miller (2000) believed that the accumulation of goodwill and technology is a very important competitive weapon, and goodwill and technology are accumulated over time, so the establishment time of the enterprise is directly proportional to the corporate performance. Li (2006) used data from software companies in mainland China and Taiwan from 2001 to 2002 concluded that the shorter the establishment time of the software company, the higher the operational efficiency. He believes that software companies that have been established for a long time may be weaker than new companies in terms of technology, expansion and talent attraction, and will accumulate a lot of administrative costs.

2.2.3. Industry-specific factors

Intellectual capital: Nick, Sehwa, Ming-Chin, Shu-Ju, and Yuhchang (2005) found that market value and financial performance were affected by intellectual capital, and it may be an indicator for future financial performance based on data from 4254 firm- year observations in Taiwan Stock Exchange. Riahi-Belkaoui (2003), Min and Wenchao (2011), and Rindu Rika (2015) all concluded there is positive relationship between intellectual capital and financial performance or value of enterprises, but the intangible assets of different industries contribute differently. The higher the company's intangible assets, the higher the company's ability to generate profits, and investors will appreciate the company, thereby increasing its value. For Chinese film and television companies, Junhui (2013) pointed out that the valuation of film and television media companies should fully consider the impact of intangible assets on corporate value. Liang (2015) and Jingjing (2017) demonstrated the role of intangible assets in enhancing the value of film and television media companies through factor analysis-multivariate regression analysis.

Star power: Some of the prior research on movies has treated stars as high-equity brands that enjoy name recognition, positive image, and an association with particular types of movies (Levin, Levin, & Heath, 1997). Based on Litman and Kohl (1989), Sochay (1994), and Prag and Casavant (1994) views, they found that a significant relationship between presence

of stars and film revenues in American. Reddy, Swaminathan, and Motley (1998) studied star talent, genre and critical criticism have an important influence on Broadway performances. Albert (1998) results showed star power have an effect on appeal audience to movie theatre and estimate the possibility of box-office success. Rui (2015) believed that well-known artists can increase the box-office income, and the celebrity effect and derivative effect of the artists themselves will bring additional value to the film and television enterprises in China. Ying (2015) proposed that media companies need to pay attention to the appeal of stars to enhance corporate value. Stars hold a certain proportion of equity, which has become an important measure for many film and television production companies to innovate incentive mechanisms and gather core resources (Yimei, 2016). Xiaojuan (2018) pointed out that star ownership is a way to indirectly control the equity of film and television companies in the NEEQ market, and this method is more common in the film and television industry.

Electronic word-of-mouth: Electronic word-of-mouth is when a consumer's interest in a company's product or service is reflected, like film rating. Previous literature focused on the relationship between box office revenue and film review (Litman, 1983; Litman & Kohl, 1989; Prag & Casavant, 1994; Litman & Ahn, 1998; Ravid, 1999). Using data all 1687 movies from 1956 to 1988, Wallace, Seigerman, and Holbrook (1993) concluded that, critic rating has impact on box-office success. They found that movies with high ratings will make money for every positive review they get, while positive reviews will not benefit movies with low ratings. Ravid (1999) considered movie reviews as a source of high income. He concluded that the more comments the movie receives, whether positive or negative, it will earn higher returns. Liu (2006) used word-of-mouth (WOM) to examine how it helps explain box office revenue. He resulted that there is a positive correlation between professional film ratings and the box office. Yanru (2014) proved through empirical research that online review scores also have positive correlations for movie box office. The film review or movie rating largely represents the audience's satisfaction with these movies or programs. The higher the online rating of the movie, the higher the box office income; thus, it can be further inferred that the movie box office income will increase the company's operating income, thereby increasing the market value of film and television companies. Jiawen and Xiujuan (2015), based on Metcalfe's law, believed that customer value (i.e. the number of active users on the network) is an important factor affecting the value of Internet companies.

Production ability: Jinhui and Jingxuan (2016) established a set of network drama value evaluation system based on the industry chain through the analysis of the creative-broadcast-marketing stage of the network drama industry chain. They proposed the use of the production company's annual output and click volume and production cost to express production capacity. According to Jingjing (2017), the number of film and television dramas produced and the proportion of inventory on behalf of the production ability have a strong positive correlation with the value of film and television enterprises in China. For film and television enterprises, their production ability also reflected the drama being filmed (inventory). Capkun, Hameri, and Weiss (2009) pointed out that there is a positive relationship between inventory and financial performance in manufacturing companies over the 26-year in America. Gaur, Fisher, and Raman (2005), Rumyantsev and Netessine (2007), and Basu and Wang (2011) demonstrated that among US-listed retailers, there is a negative correlation between inventory performance and financial performance.

3. Research Methodology

To test the hypotheses, we construct an unbalance panel data set of the film and television firms with main business about investment, production and sale of film and television works in NEEQ market during 2013 to 2018. We exclude continuous negative operating income comprises (ST comprise) and we get our database consists of the panel data set of 88 firms. This panel is unbalanced since data were not available for all companies with 6 years, such panel data incorporates time series as well as cross sectional variation. So, 300 unbalanced panels were built. We collected the secondary data of the financial information and non-financial information based on Tonghuashun Financial Network and annual reports. As some of industry-specific factors' measurement in this paper requires data of Chinese NEEQ market that are not available in any existing databases, we hand-collected data of these factors (star power, electronic word-of-mouth and production capacity) from Annual Reports and Douban Movie.

Dependent variable: According to Qiu (2013), Hanqing and Jun (2016), and Wenshi (2018), the return on equity (ROE) is used as the firm performance of media companies in China. Compared to return on asset (ROA), ROE is the main concern of listing supervision in China and it refers to the return on portfolios. Zijun (2013) showed that under the assumption of linear homogeneity, there is a direct correlation between the value of a company (measured by the performance of a new portfolio) and ROE.

Independent variables: There are twelve independent variables as listed in Table 2. The independent variables include financial factors, non-financial factors, and industry-specific factors of the film and television companies in China. Among them, star power as measured by whether there is a star (STAR), it was found that there were no more than 30 film and television companies with star holdings in the NEEQ market. Electronic word-of-mouth as measured by average score of film, television, and program in Douban movie website (RATING). In China, Douban Movie is a relatively typical feedback mechanism platform, which mainly reflects the word-of-mouth effects of media products. Their users can rate ten levels of scoring, from one to ten. The higher the level, the higher the user's preference for the work. Therefore, many scholars choose Douban network data for empirical analysis (Songyue & Xin, 2016). This paper considers number of film and television products, investment, and sales in the annual report of film and television's company in NEEQ market. Although there is little literature about star power, ratings of media product, and firm value, most empirical paper focus on analysis of the relationship between star power, ratings, and box office so we include these variables in our analysis since they may be related to firm value.

Table 2: The Index System of Film and TV Firm's Corporate Value Evaluation

Type	Variable	Measurement	Expected sign
Financial factors	Leverage (DR)	Total liabilities/Total assets *100	Negative
	Asset Utilization (TAT)	Operating income/ total assets * 100	Positive
	Growth Ability (SG)	(Total income(t) - Total income(t-1) / Total income(t-1) * 100	Positive
Non-financial factors	Governance Efficiency (MH)	Total executive holdings/ total share capital* 100	Positive
	Equity Concentration (DIRECT)	Largest shareholder holdings/total share capital* 100	Positive
	Firm Size (SIZE)	Natural log of total assets	Positive
	Established Time (YEAR)	Natural log of year since the establishment	Negative
Industry-specific factors	Intellectual Capital (INTANG)	Intangible assets/Total assets * 100	Positive
	Star Power (STAR)	Whether there is a star holding (1=Yes, 0=No)	Positive
	Electronic Word-of-Mouth (RATING)	Average Score of media product measure by Douban Score (0-10)	Positive
	Production Capacity	Number of film and television and programmes produced, invest and sale (NUMBER)	Positive
		Inventory/Total assets * 100 (INV)	Negative
Firm value	Return on Equity (ROE)	Net Income/Shareholder's Equity	

There are there hypotheses on this study

H1: There is no significant relationship between financial factors and ROE of film and television's company in NEEQ market.

H2: There is no significant relationship between non-financial factors and ROE of film and television's company in NEEQ market.

H3: There is no significant relationship between industry-specific factors and ROE of film and television's company in NEEQ market.

This study uses panel data analysis to prevent the data loss due to the collection and to obtain more dynamic information. It reduces the number of multicollinearity problems and displays higher degrees of significance. Panel data can control for individual heterogeneity due to hidden factors, which, if neglected in time-series or cross section estimations, leads to biased results (Baltagi, 1995). The most common models of this kind are the fixed effect regression model and random effect regression model (Balestra & Krishnakumar, 2008; Baltagi, 2001). Based on Table 2, the econometric model to be estimated is:

$$ROE_{it} = \alpha_i + \beta_1 DR_{it} + \beta_2 TAT_{it} + \beta_3 SG_{it} + \beta_4 MH_{it} + \beta_5 DIRECT_{it} + \beta_6 SIZE_{it} + \beta_7 YEAR_{it} + \beta_8 INTANG_{it} + \beta_9 STAR_{it} + \beta_{10} \mathrm{RATING}_{it} + \beta_{11} \mathrm{NUMBER}_{it} + \beta_{12} INV_{it} + \varepsilon_{it} \quad (1)$$

In equation 1, y_{it} denotes dependent variable; α_i is random variable, indicating that there are *i* different intercept terms for *i* individuals. β is 1**N* regression coefficient column vector. There are 1**N* regressors in independent variable x_{it}, with ε_{it} as the error term.

4. Results

According to the results in Table 3, all data are normally distributed. It shows there are large differences in various variables between different NEEQ film and television companies.

Table 3: Descriptive Statistics

Variable	Mean	Median	Maximum	Minimum	Std. Dev.
DR	0.3555	0.2946	1.1552	0.0091	0.2363
TAT	0.5159	0.4500	3.5800	-0.3843	0.4340
SG	1.0873	0.2182	54.9298	-1.0527	4.9522
MH	0.5484	0.5567	1.0000	0.0000	0.2869
DIRECT	0.5014	0.4805	0.9994	0.1537	0.1986
SIZE	182.4715	95.8755	1752.0530	7.5657	237.1773
YEAR	8.7800	8.0000	22.0000	3.0000	3.9738
INTANG	0.0167	0.0002	0.3898	0.0000	0.0478
STAR	0.1333	0.0000	1.0000	0.0000	0.3405
RATING	5.8519	5.9000	9.2000	2.3000	1.5462
NUMBER	6.5833	5.0000	37.0000	0.0000	5.8427
INV	0.3469	0.3153	2.7315	0.0000	0.3224
ROE	0.0104	0.04601	3.7396	-4.7534	0.5805

For financial factors, average leverage (DR) in the sample indicates that approximately 36 percent of total assets are represented by long-term debts. Most of the company are in the initial stage or growth stage. Although the differences of growth ability (SG) between different companies above 50%, the average year-on-year growth rate is 108.72%, and the overall situation is better.

For non-financial factors, it is not common for China's executives to hold shares above 50%, but the sample average reflects that the management shares of the film and television company in NEEQ market are relatively high. The previous research show that when executives do not hold shares or their shareholdings are low, management cannot balance shareholders and are subject to strict supervision by shareholders; when executives have a high shareholding, the internal distribution of corporate profits is balanced and agency costs can be reduced (Xuezhen & Yuan, 2017). Theoretically, if the shareholding ratio of a single owner is above 51%, it is an absolute shareholding ratio. It means that the enterprise is likely to exist in

a dominant situation. However, the sample data obtained indicate that the shareholdings of cultural enterprises are relatively dispersed. The raw data for firm size (SIZE) is the most scattered in Table 3. The difference between the maximum value and the minimum value is 234 times. Since there are many film and television companies, the industry is fiercely competitive, and the degree of monopoly is low.

For industry-specific factors, the average of intangible assets shows that the innovation ability of these companies in China is still relatively weak. There are only 153 observations for electronic word-of-mouth (RATING) because some works are not expected to be popular, or are not shown on theatre and TV shows, not every year's film and television works have a Douban rating. Audiences have different degrees of recognition for different film and television products, but in general, the average score of samples is 5.8519 points.

The unit root test (which we used ADF - Fisher chi-square test) results applied to the panel series level rejected unit stationarity at the 5% significance level of each variable, which was beneficial to stationarity. Because STAR is dummy variable, this test excluded it. Compared with other variables, the number of observations of RATING is too few which may not be sufficient to prove the stationarity of its unit root. So, RATING variable should be deleted.

So, the model estimation is modified to:

$$ROE_{it} = \alpha + \beta_1 DR_{it} + \beta_2\, TAT_{it} + \beta_3 SG_{it} + \beta_4\, MH_{it} + \beta_5 DIRECT_{it} + \beta_6\, SIZE_{it} + \beta_7\, YEAR_{it} + \beta_8\, INTANG_{it} + \beta_9\, STAR_{it} + \beta_{10}\, NUMBER_{it} + \beta_{11}\, INV_{it} + \varepsilon_{it} \quad (2)$$

We have explored there is not high correlation among variables and have found out that all correlation coefficients are less than 0.6. It means multicollinearities are not presented in the estimation. Then, we did the Hausman test show the results indicate that for the models with the significance level of 1%. So, not all individual effects in the models are random. Therefore, this study uses a fixed effect regression model to analyse the regression of panel data.

The adjusted R-squared of the model is 0.5938, which means that the independent variables in the model can explain the 59% difference in ROE. The factors that affect the company's corporate value are complex. The variable we set cannot explain the change of the dependent variable, and the possibility of ignoring some variables is higher. The regression results show

that the F value of the model is 5.4333. The P value less than 1% confirms that the model is statistically significant.

According to regression results in Table 4, leverage (DR), asset utilization (TAT), growth ability (SG), equity concentration (DIRECT), firm size (SIZE), established time (YEAR) and intellectual capital (INTANG) have a significant impact on the firm value (ROE) of all selected film and television companies. However, there is no effect of governance efficiency (MH), star power (STAR), production capacity (NUMBER, INV) on the firm value (ROE) in selected film and television companies.

Table 4: Fixed Effect Regression

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-7.8267	1.4664	-5.3372	0.0000
DR	-1.0858	0.2007	-5.4113	0.0000***
TAT	0.3281	0.0871	3.7672	0.0002***
SG	0.0310	0.0053	5.8393	0.0000***
MH	0.2345	0.2358	0.9943	0.3213
DIRECT	2.4592	0.5752	4.2754	0.0000***
SIZE	0.4361	0.0755	5.7785	0.0000***
YEAR	-0.7083	0.1956	-3.6206	0.0004***
INTANG	1.9674	1.1606	1.6952	0.0916*
STAR	0.0257	0.1941	0.1324	0.8948
NUMBER	-0.0028	0.0069	-0.4117	0.6810
INV	0.2376	0.2042	1.1633	0.2461

Note: Coefficients are shown as significant at 10 percent (*) and 1 percent (***).

Compared with the expected signs, the results of most variables in Table 2 are as expected, except for NUMBER and INV. Among them, the largest coefficient is DIRECT showing that the equity concentration has the greatest impact on the value of film and television companies in NEEQ market. Beside this, film and television company should pay attention to the impact of leverage and intellectual capital on the company's value. From Table 4, we can show that these two factors have a greater impact on the company's value.

5. Conclusion and Recommendations.

Since China domestic scholars are still in the early stages of studying the valuation of film and television companies in NEEQ market, then they are still under discussion. There is limited analysis which combines these three factors. So, our research may be considered as a step to fill the gaps in the literatures. The following conclusions are drawn:

First, the empirical results show that to enhance greater value of the film and television company in the NEEQ market, all financial factors, some non-financial factors, namely equity concentration, firm size, established time, and industry-specific factor which is intellectual capital should be considered since they have significant effects on firm value.

Second, the regression of governance efficiency which is non-financial factor and some industry-specific factors which are star power and production capacity are not significant in this study. The reason why the governance efficiency is not significant may be that the equity incentives of film and television companies in NEEQ market have not been fully implemented in the initial stage. The main method of strengthening equity incentives is to increase the shareholding of executives. Executive shareholding is an important part of employee shareholding, but little film and television company implement employee stock ownership plan in NEEQ market, which is weaker than the implementation of equity plans in other industries. Some stars do not directly hold equity but operate indirectly through investment companies or agents. The ownership of stars has not been controlled in terms of shareholding structure. Some stars hold relatively high equity in film and television companies, but the disclosure is not very clear in NEEQ market, which may be the reason for the insignificant of star holdings. Due to the cyclical development of stars, stars will not always add value to the enterprise. Under the business model with stars with huge fan bases as the core, the life cycle of stars will be shorter. The assumption that the company's value is affected by production capacity cannot pass. The reason may be that the production capacity has a relatively low proportion in film and television enterprises in NEEQ market. In the descriptive statistics, the average number of film and television products produced (NUMBER) and the proportion of inventory (INV) are only 6.58 and 0.34, and their effect is not obvious. On the other hand, since data are not fully available for RATING then it is excluded from the regression. The impact of film and television product quality on enterprise value may be greater than production capacity. The market may not pay attention to the number of productions. However, the film and television company with a higher net profit ranking or the highest growth rate are mainly

engaged in the investment and distribution of TV series. This shows that the production ability does have an impact on the corporate operation.

Nevertheless, by comparing with the film and television companies in the main board, the information transparency of film and television companies in NEEQ market is low. For some specific variables, we can only obtain information from the annual report. It is also expected to expand the time span of the sample, so we could obtain more samples in the future, making the research results on this topic more convincing and adaptable. This is the limitation of this study.

For the policy implications, firstly, the film and television company have small share capital and the large fluctuation of operating indicators in NEEQ market, coupled with the uncertain profitability of film and television products, so the value of the companies in NEEQ market varies. The film and television companies should appropriately increase or maintain the concentration of equity and encourage shareholders to participate in company management and supervision activities, which is conducive to enhancing the company's value. It is necessary to clarify the shares of all parties in the company. Different investors have different investment purposes, which has a greater incentive for the company's management. They also need to pay attention to the proportion of star shares, control the company's core shareholding structure. Further, they should optimize their internal governance structure according to their own situation. At the same time, some companies with high asset-liability ratios should rationally adjust their capital structure, increase equity accumulation through debt-to-equity swaps, promote the healthy development of enterprises, and increase overall value. They also need improve their operating capabilities, increasing intellectual capital, controlling the scale of an enterprise, and maintaining its competitiveness to enhance corporate value.

Secondly, it is recommended for investor to analyze the company's value by combining comprehensive financial factors with non-financial factors and industry-specific factors. The non-financial factors and other aspects should explain the company's strategic choices, and then be able to see whether the company has ability to sustain long-term operations. Furthermore, the multi-factor analysis can be used to comprehensively explore the growth of the company.

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