

Price Discrimination of Film Products and Building of Hierarchical Market under the Background of “Internet Plus”

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Abstract: Price Discrimination of film products is theoretically feasible and logically inevitable, and it has been used for a long time in film industry as well. However, there are practical paradoxes in the new environment due to market factors like popularization of Internet environment and Online to Offline (O2O) retailers between hierarchical markets. Compared with high-level markets, low-level markets are lack of conditions for differentiated lower price like cinema infrastructure, and environment for film consumption market, so that the consumption potential for market has not been motivated yet. Therefore, it is quite important to pay close attention to how to expand the market by clearer gradient pricing structures and Internet platform.

Keywords: price discrimination; film products; demand elasticity; Internet Plus; hierarchical market

Pricing of film products is one of the most important sections of film industry, and price discrimination has been generally adopted for domestic film products both in the sections of distribution and show. However, with the influence of Internet and the intervention of O2O retailers in film industry chain, the price of film products is shared by different interest entities. In practice, paradoxes exist in the price discrimination of markets with different hierarchies in theory, which is

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rather unfavorable to expanding the film markets and cultivating film consumption habit in small-and-medium cities. Consequently, it is necessary to discuss the price discrimination system in new environment.

1. Theoretical Basis of Price Discrimination of Film Products

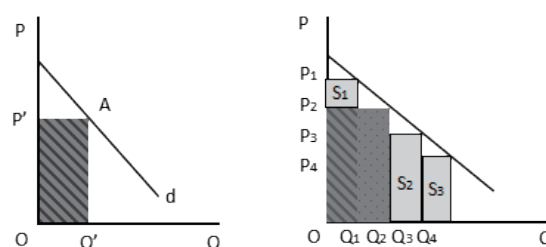
According to the pricing theory of economics, a majority of traditional enterprises in the market widely adopt cost pricing method. Besides, many enterprises apply demand-driving pricing method due to the unique market characters of products, in which a special pricing method—price discrimination is included. Price discrimination means that “enterprises promote a product or provide a kind of service at two or more than two prices that do not reflect the cost proportion difference”,^[1] “Such price reflects the demand, understanding about the value and affordability of the buyer instead of the true value of product itself”.^[2] Film industry is typical in adoption of price discrimination. The price discrimination of film products should be regarded as third-degree price discrimination, namely, suppliers of film products differentiate consumers according to different demand curves, set different prices according to different consumer groups, so as to maximize profit and economic benefit. The price discrimination of film products can be reflected in two stages namely distribution and show. At distribution stage, the issuing prices of copyrights vary in international, domestic market and in different regional markets at home as well as at different terminals like cinema, television and network. At showing stage, the price differences in terms of show time region, audience and film product reflect that price discrimination is universally applied in film industry. .

The theoretical possibility of price discrimination

in film industry lies in the following aspects. Firstly, film is creative industry. In comparison with other industries, one of its most important and distinguished market characteristics is the high cost of input at the initial stage, especially talent and knowledge investment at creative stage while marginal cost at the development stage of industry chain with continued creativity could approach or even equal to zero. In particular, “the significant development of digital distribution and showing network has enriched the hierarchy of film market” in film technical field.^[3] Therefore, it is possible to refer to basic price and marginal cost. Secondly, since film products always contain some cultural understanding and identity, the market barrier based on cultural barrier exists in the film industry, especially in the immature domestic film market. Meanwhile, the attraction of the same film product at different consumption time and the showing facilities at different cinemas differ markedly. Taking these factors into consideration, the market of film industry is dividable. Moreover, with the integration of value and capital chains of film industry, those fleet film enterprises or alliances with a master of filmmaking, distribution and showing sections are capable of forming monopolistic competition based on the “natural monopoly” of film industry and of basically controlling of circulation channel and issuing price of film products, which is the theoretical premise of price discrimination. Finally, with the analysis of current national conditions of China, the trend of polarization pattern of urban and rural development is still apparent. The external performance of film industry lies in different market positioning of film products in different urban and rural markets, which represents different lifestyles. In economics, it reflects different demand elasticity. For example, in the high-level markets mainly of first-tier cities, since film products, as leisure and entertainment products, are of strong popularity and

universality. There are many types of alternatives as well, such as drama and concert, film is not the primary choice for high income group. However, in low-level markets, due to the influence of consumption habits and income levels, film products are regarded as higher spiritual consumption and enjoyment especially in the third-and-fourth-tier cities, even the fifth-tier cities, the positioning differences lay a theoretical foundation for price discrimination.

Price discrimination I applied in the film industry for the following market purposes. Firstly, for film manufacturers, different pricing for different consumption demands maximizes the consumer surplus of film market. As Picture 1 shows, when a pricing mechanism is adopted for film products and the price is a balanced market price (P'), according to the rational person assumption in economics, the consumers above Point A on demand curve d can accept the price and consumer surplus is positive. As a consequence, the consumers of quantity Q' will have practical film consumer behavior; the consumers below Point A on demand curve d will choose to withdraw from the market and the final earnings of film manufacturers will be the rectangle $P'AQ'O$. When the prices of film products have some gradient price system, every level price of P_1 , P_2 , P_3 and P_4 corresponds to the film demand of Q_1 , Q_2 , Q_3 and Q_4 . Supposed that P_2 is a balanced market price and equals to P' at the same time, then Q' equals to Q_2 . Under such circumstances, Q_1 (P_1-P_2) changes into the earnings of film product manufacturers from consumer surplus in the left picture. Meanwhile, lower prices like P_3 and P_4 can abstract the potential consumers or non-consumers of single price system into actual consumers. The new film audience bring interests S_1 and S_2 . Consequently, the earnings that multi-ticket price system brings to the manufacturers are $(Q_3-Q_2)P_3+(Q_4-Q_3)P_4+(P_1-P')Q_1$. Moreover, as for the



Picture 1 Earnings of film product manufacturers under different ticket price structures.

distribution and showing parties of film products, the adoption of big data to anticipate film market is of richer practical significance, which is not only reflected on the film arrangement but also on the pricing process of film ticket price. Higher film price can be set to satisfy larger market demand, and in the cities with higher consumption ability, which will provide basis for better cooperation with O2O ticket booking platform.

2. Practical Paradoxes of Price Discrimination for Film Products

According to the theory of price discrimination, high price should be adopted in high-level markets with small demand elasticity, due to consumers' higher capability of value understanding, identity and affordability of film products. As for transitional markets mainly in the third-and-fourth-tier cities and lower-level markets, film product demand shows high elasticity with factors like insufficient and less varied cinemas as well as the structural deficiency of consumer demand and consumption habits of film products caused by consumer income structure. Low price should be set accordingly to the largest extent. On the contrary, if high price is set in these areas, consumers with low expected delivered price will opt out of the market. "The nature of price discrimination is to realize payment of customers

with willingness at specific price, namely, to satisfy audience with different affordability and payment willingness audience by setting different gradient ticket prices.”^[4]

According to the CSM report *Film Audience Measurement and Evaluation*, the proportion of audience with the income of 1-1,499 yuan and 0-3,499 yuan is lower than that of non-audience; the proportion of audience with the income over 4,000 yuan and 8,000 yuan is higher than that of non-audience. The data indicates that film consumption is largely influenced by income. In high-level markets with higher average revenue of residents, film consumption is more popularized. On the other hand, if we only consider groups with the income over 4,000 yuan, just take Beijing Wangfujing Movie City and Changsha China Film Jindianfang Movie City as example, audience with the income over 4,000 yuan account for 8.3% and 30.4% respectively, which shows that the proportion of audience with higher income is lower in high-level markets. It proves that low-level markets are more sensitive to ticket price factor than high-level markets. In low-level markets, people with higher income will choose film consumption while people with lower income may give up film consumption due to high film ticket price. Oppositely, in high-level

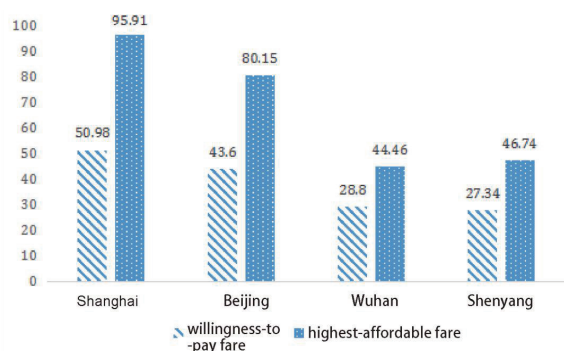
markets, since there are many substitutes of film consumption, people with higher income can choose watching movie or other leisure and entertainment activities instead, like drama. Film ticket price is not an impeding factor for them. Finally, from the perspective of willingness-to-pay for ticket price, the report shows that the willingness-to-pay and highest-affordable film ticket price for the audience in Shanghai and Beijing is higher than that in Wuhan and Shenyang (As picture 2 shows).

According to the above data, it can be inferred that suppose consumption elasticity exists in high-level markets and low-level markets, namely both of income elasticity and price elasticity are included, and suppose E is price elasticity of demand, then we can know that:

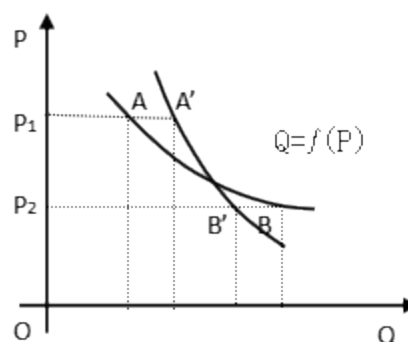
$E = \text{percentage of quantity demand change} / \text{percentage of price change}$

Namely, $E = (\Delta Q/Q) / (\Delta P/P)$

As picture 3 shows, line AB represents the consumption price elasticity of low-level market film products under ideal condition; with the change of price, there is significant change in quantity demand, which has greater sensitivity to price change. Line A'B' represents the consumption price elasticity of high-level market film products; with the change of price, the quantity demand changes slightly and



Picture 2 Comparison chart of willingness-to-pay ticket price and the highest-affordable ticket price in different cities.



Picture 3 Film consumption elasticity curve model of high-level and low-level markets.

quantity demand has lighter sensitivity to price change. Consequently, as it is required by price discrimination method, only by adopting higher price and lower price for high-level markets and low-level ones respectively, can consumption elasticity be made used to the largest extent and maximized benefit can be realized.

However, contrary to theoretical pricing principle, the pricing reality is that the film ticket price of high-level urban markets tends to be cheaper than that of low-level markets. It can be accounted by many factors. First of all, with the constant increase of film product supply, there is a game playing for film's market positioning between the medium-and-high-end spiritual consumer products and general cultural leisure consumer products in different regional markets. After a substantial increase, the total production of Chinese film products tends to be steady. More films enter into the market with larger show proportion. Especially for high-level urban markets, due to improved cinema infrastructure larger capacity of film in the market, almost all the films on show enter into this market level. Meanwhile, due to the prosperous creative industry and rich substitute varieties of film consumption in high-level urban markets, film products are positioned as general culture consumer products, while, in low-level markets, due to imbalanced income structure among citizens and comparatively low average personal and family income, cinema construction and development is at the initial stage and the investment of film product copyright is relatively weak, as a result, there is less supply of films in this market. Therefore, film consumption is positioned as high-end spiritual consumer behavior with real consumers of higher income while more are potential and even non-consumers. Secondly, the influence range of internet industry on different market levels varies. According to the 36th Statistical Report on Internet Development in China, "the

internet penetration rate of urban and rural areas are 64.2% and 30.1% respectively, with a gap of 34.1%".

[5] The internet influences the continuous deepening of industrial forms and enterprise business modes. Film industry is no exception, specifically in film ticket price. Owing to lower internet penetration and comparatively lower online ticket booking penetration, consumers of low-level markets cannot or enjoy discounts of online ticket booking. For example, most groupon websites of film tickets are not distributed in medium-and-small towns or not well arranged, so most audience of low-level markets has to buy ticket in cinemas, especially in fourth-tier and fifth-tier cities. But most audience of high-level cities book tickets through online groupon websites and finish seat selection and other sections of O2O links online. Finally, industrial value chain is integrated in the deep practices at different market levels. With the constant growth of capital vitality of film market, film industry tends to show the development trend of the integration of whole industrial chain. Meanwhile, it has become the trend for film enterprises to master production, distribution and showing at the same time. Under such circumstance, in order to realize favorable box office and marketing results, film producers and distribution parties will arrange ticket subsidy by cooperating with e-commerce and showing parties so that the on show rate at cinema is increased and ticket price is decreased. Low-price advantage and social marketing of box office praise will influence consumers' choice of films. Box office data feed back film product promotion. When the audience increase, according to:

Total box office result = film ticket price per person each time × audience quantity

The film producers and distribution parties can recover the cost for subsidy and further make profit. However, Owing to not sound cinema distribution, not varied structure, limited capacity of film consumption, in popular film consumption and even



Film producers understand that low ticket price increases the consumption times of consumers so that the total income will be balanced.

some cinemas are invested and run privately in short of support from upstream and downstream industrial chain. Operators tend to neglect low marginal cost and expect to recover fixed cost by high ticket price so as to make up the profit loss caused by small audience number. Besides, the ticket price subsidy between industrial chains is provided over the internet terminal. Consequently, these two aspects hinder producer subjects of low market levels to lower ticket price initiatively.

3. Feasible Paths of Film Price Discrimination and Hierarchical Market Construction under the Internet Pattern

According to the price discrimination theory and status analysis of film industry in the two parts mentioned above, the price discrimination of film industry does have the possibility of “Pareto improvement”^[6]. The possibility relies on the two features of the existing development of film industry. First of all, incomplete information static game exists between film producers and consumers in film industry theory, which is reflected in

the formation of film ticket. On one hand, film producers expect high ticket price to realize profit pursuit; on the other hand, film consumers expect low ticket price to balance their income level and demand for spiritual product. At the same time, film producers understand that low ticket price increases the consumption times of consumers so that the total income will be balanced. Cooperative price game of film production, distribution and showing even exist inside producers. Secondly, with the deepened influence on and intervention of the internet and in film industry, it will bring subversive transformation to the business model of film producers, the profit model will change consequently, and the price components of film products have greater possibility accordingly. In the consumption model and consumer behavior, different interest subjects share responsibility for film ticket price but the insufficient representation of the responsibility sharing in low-level markets fails to motivate the consumption potential completely.

Therefore, in order to realize reasonable price discrimination with new market competitiveness, there should be further exploration for practice in the following aspects. Firstly, differentiated

distribution of copyright should be realized to the maximum degree between regions according to market positioning of film audience. Copyright fee is one of the largest investment of low-level markets, especially for cinemas in the third-and-fourth-tier cities, as well as an important reality factor hindering the decrease of film ticket price in low-level markets. Therefore, based on film positioning, film products should exploit the market potential of the third-and-fourth-tier cities to the limit in distribution. Film products should be distributed in low-level markets, horizontal alliance marketing with local cinemas should be realized, especially with non-theatre-chain cinemas with single layout, which should be incorporated into the overall industrial value chain, so as to realize common promotion and mutual benefit.

Secondly, internet platform should be constructed and promoted to the maximum limit. Due to the disparity between urban and rural internet penetration, lots of e-commerce or film producers in internet O2O pattern cannot share the responsibility for film tickets. Before the gap is narrowed gradually, producers should establish a sound online platform, be independent of single cinemas or the

third-party ticket platform, maximize the expansion of vertical degree, and promote online platform and film into the cinemas in low-level markets in an integral way. For example, if online-platform ticket booking machines are placed in cinemas, it not only provides discount of film ticket, but also serves as the integral promotion platform of other films on show by new media technology so as to complement on-site ticket booking and realize horizontal cooperation with cinemas. Although the discount of online ticket booking shunts the consumers buying tickets onsite, the total number of consumers will increase at a lower average price. As a consequence, the total box office result will be balanced even increased. By this method, we can make up the internet penetration gap between market levels and realize the layout of price discrimination.

Thirdly, we can set up multi-dimensional and multi-gradient network system of film ticket difference (shown as table 4), simplify price discrimination procedure with standardized market model, decrease the difficulty of price discrimination and make it feasible to vertically expand low-level market hierarchy. For example, according to the number of cinema and screen, resident population

Table 4: Assumed design model of film price discrimination

| Hierarchy market | | | | | Subdivision of consumer group | Film subdivision | Time subdivision |
|---------------------------|-------------------------------|-------------------------------|---------------------------------|--------------------------------|-------------------------------|------------------|------------------|
| High-level markets | Subdivision system indicators | Number of cinema | Subdivision hierarchical market | First-tier super-city market | | | |
| | | Number of screen | | Second-tier city market | | | |
| | | Number of cinema chain | | Third-tier transitional market | | | |
| Annual income of resident | | Fourth-tier town market | | | | | |
| Low-level markets | | Social consumption index | | Fifth-tier town market | | | |
| | | Permanent resident population | | Countryside market | | | |

and resident income structure, we can divide the cities at different market levels into more detailed market gradients; longitudinally reasonable ticket price scope can be set, which are aimed at every market gradient. Meanwhile, we can horizontally formulate corresponding price discrimination according to different time and consumer groups in the same market gradient, standardize disparity system from different dimensions.

Fourthly, we can improve film product quality and increase showing rate. Only with good content and story can film products possess core market competitiveness, so that we can minimize the influence of price factor on the consumption elasticity of film products. Meanwhile, good content helps to cultivate consumers' consumption habits, especially in the areas with inactivated film con-

sumption potential of low-level markets.

4. Conclusion

In general, partial deviation from theory and practice in new environment exists in the price discrimination of film industry. The prosperity of film market needs to develop small-and-middle-size city markets and the totally activated market potential depends on the gradient and reasonable price discrimination of film products, as well as the vertical development of market and linkage cooperation of related industries. Although lots of restriction exists during practical development, with the integral development of film industry in new period, it is possible and feasible to realize healthy price system and market of film products.

REFERENCES

- [1] Tang Lingling. Price Discrimination: No Way Back to Film Enterprise Efficiency[J]. *Film*, 2004. (2) 48-49.
- [2] Liu Fan. Economics of Film Industry[M]. Beijing: Culture and Art Publishing House, 2010. 26.
- [3] Qi Yong. Price Discrimination Strategy Research of Film Ticket[J]. *Journal of Beijing Film Academy*, 2012. (4): 17-21.
- [4] Ma Ke. Gradient Analysis of Film Ticket -Analyzing Film Ticket from Economics Perspective[J]. *Movie Literature*, 2007. (21): 12-14.
- [5] CNNIC. The 36th Statistical Report on Internet Development in China [DB/OL], 2015. (6).
- [6] Gao Hongye. Western Economics (Fifth Edition)[M]. Beijing: China Renmin University Press, 2011. 252.