Disney-Pixar Merger Analysis

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The merger between Disney and Pixar is considered as one of the most successful and famous events throughout the merger history. In 2006, Disney offered a valuation of $ 7.4 billion to purchase Pixar, eliminating a significant threat by turning its potent competitor to partner. To review this successful merger, we need to understand how the merger benefited companies while protecting consumers.

Disney and Pixar are both dominating companies in the animation industry, competing with DreamWorks, Nickelodeon, and Warner Bros. Animation. Disney, founded in 1923, is considered as one of the most powerful animation studios, having good reputation and significant position in producing animated films. Pixar, on the other hand, is a promising newly-born studio that features on computer-animated films. In the animation industry, The cost of production is high; consumers' choices favor long-existed and high-reputation studios; animation production technologies are possessed by only a few firms. Thus, Few major studios dominate the whole market, formed an oligopoly, and competed by choosing quantity. On the other hand, consumers have relatively elastic demand since films are not necessities and numerous movies provide them with a wide range of choices. The bargain power of buyers and various film choices determine that oligopolists follow the Cournot model other than Bertrand since studios can not compete by price.

The merger benefited both companies, combined their advantages, and allowed Disney and Pixar to specialize. On one hand, RenderMan, owned by Pixar, can grant Disney cutting-edged 3D technology, making it possible for Disney to produce animation of higher quality. Also, The merger can prevent potential competition, increase Disney's profit and market share. On the other hand, Pixar needed Disney as a competent partner that owned potent human resources, sufficient budget, preeminent reputation, and loyal audiences. Merging enabled Pixar to fully concentrate on the film production with solid access to funding that Disney could provide. Thus in January 2006, Disney purchased Pixar for $7.4 billion, offering each share of Pixar's stock at the price of 2.3 shares of its counterpart.

According to the Cournot competition model, the merger reduced n, which means that Disney had potential to increase the quantity, set high prices, and thus earn more profit. The merger turned a potent competitor into a partner, which benefits both firms because if the number of competitors is large, the quantity will decrease, meaning lower market share. From this perspective, merger benefited the studios but was unfavorable to consumers due to loss in consumer surplus. However, in the realistic situation, the harm to consumers diminished due to the particularity of film market. First, The cost of producing a film is relatively high, making it difficult to increase quantity. The inability to significantly increase the movies quantity reduce the possibility of pricing high. Thus, the adverse condition to consumers was weakened. In addition, if we assume the quantity can increase regardless of the limitation on mass production, consumers were provided with a wider range of choices as the quantity goes up. As an outcome, the price elasticity of demand would become more elastic, lowering the feasibility of pricing unreasonably. Finally, the powerful alliance offered consumers with high-quality animations. The improvement on film quality can also be considered as beneficial to consumers.

To sum up, The merger allows Disney to maintain and even increase market share while protecting consumers to some degree. The tradeoff between animation studios and audiences makes the film market in an equilibrium, which makes the merger between Disney and Pixar successful.

COURNOT MODEL OF ANIMATION MARKET

Assume Inverse Demand: P(Q)=150-2Q

Cost Curve: C(qi)=10qi (i=1,……,n)

In the animation market, we assume that there are only 5 major companies before the merger

Thus, n change from 5 to 4

Profit maximization Mr=Mc πi=(150-2Q)*qi-10qi

Profit maximization π1=[150-2(q1+q2+q3+q4+q5)]*q1-10q1

FOD of Profit=0 ∂π1/∂q1=150-4q1-2(q-i)-10=0 , q-i=q2+q3+q4+q5

Solve 140-2(q-i)=4q1 and get q1=140/4 - (q-i)/2

Symmetric: qi=140/4 - (q-i)/2

Since q1=q2=q3=q4=q5 q-i=(n-1)*q1 Thus q1=140/4-[(n-1)*q1/2]

We can get:

$$q = \frac{140}{2(1+n)}$$

When Pixar merged with Disney, n decreases. Thus, q increases, which means that Disney have potential to increase the quantity. On the other hand, if the number of competitors is high (large n), the quantity will decrease, meaning lower market share.

$$Q = \frac{140n}{2(1+n)}$$

Since p=150-2Q

$$p = \frac{1}{1+n}150 + \frac{n}{1+n}10 = 10 + \frac{1}{1+n}140$$

Thus, p increases, which means that Disney have potential to set high price.

Since profit πi=(150-2Q)*qi-10qi

$$\pi = \frac{140^2}{2(1+n)^2}$$

Thus, π increases, which means Disney could earn more profit after the merger.

Resources:

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Stock Price of Disney in 2005 and 2006 Before and After the Merger

Resources:The Walt Disney Company (DIS) NYSE - Nasdaq Real Time Price. Currency in USD from https://finance.yahoo.com/quote/DIS/history/
Date of Merger: Disney bought Pixar at 1/25/2006 Stock Price are rounded to the nearest hundredth

Date	Stock Price
2005.2	28.36
2005.3	27.59
2005.4	28.40
2005.5	26.21
2005.6	27.14
2005.7	24.88
2005.8	25.29
2005.9	24.75
2005.10	23.80
2005.11	23.95
2005.12	24.71
2006.1	23.75
2006.2	24.81
2006.3	27.62
2006.4	27.49
2006.5	27.63
2006.6	30.08
2006.7	29.78
2006.8	29.25
2006.9	29.42
2006.10	30.37
2006.11	31.12
2006.12	32.60
2007.1	33.75