

# **Development of a Value Increasing Model for Movie Industry**

**Faustine Casassus and June Wei**

College of Business  
The University of West Florida  
11000 University Parkway  
Pensacola, Florida, 32514-5750, USA  
E-mail:fc6@students.uwf.edu  
E-mail:jwei@uwf.edu

## **ABSTRACT**

An electronic value chain model was developed in order to illustrate how Information Technology (IT) impacts the current movie industrial business model at every stage of the process, from creation to release of a movie. E-business solutions were developed based on the develop value chain model. Data from top companies in the movie industry were collected to see the e-business implementation pattern. The results of this research explained the new challenges of the industry relative to technology and offered insight on how a company can develop competitive advantage using IT solutions as a powerful asset for the future.

**Keywords:** E-value chain, Information Technology, E-business solutions, movie industry.

## **1. INTRODUCTION**

The first cinematographic public showing took place in Paris in December 1895 when the Lumiere Brothers showed a moving photograph of a train to an amazed audience. Year 1915, the year Charlie Chaplin signed a contract to make a series of comedies, marked the beginning of the movie boom (Bone, 2004). As the industry began to expand, studios became vertically integrated. Such a monopolistic structure prevented fierce competition and thus restrained fast expansion of the movie industry. But by the late 1940s, the U.S. Department of Justice forced a divorcement of exhibition in order to enhance competition, which led to the growth of independent exhibitors. Forty years later certain studios are again permitted to buy or invest in theatre chains (Squire, 2004).

In the 2000s, new opportunities of selling and marketing movies are developing as movie industry heavily relies on new technologies, especially digital technology. Expanding medias, such as the Internet, home video, and cable TV among others offer new ways of consuming movies. The movie market offers a wider choice of movies at greater convenience and higher quality. The new challenge related to technology led the industry to experiment crucial transformations.

Throughout the 20<sup>th</sup> century, the movie industry has moved from a regional studio factory into a global industry. The movie industry is considered an oligopoly, where bigger players dominate the market. The six major companies control 70% of the market. They are heavily present at the top of the box office and initiate the major changes of the industry. The competitive landscape comprises six vertically integrated major studios and many small and independent production companies. However, distribution of movies is divided between independent distributors, major national exhibitions chains and smaller regional exhibitors. The movie industry offers a wide range of investment opportunities abroad. Foreign demand for American movies is high, and foreign infrastructure is set to receive the demand (Motion Picture Association of America, 2007).

U.S. movie demand represents a large part of the box office demand in Western Europe and Japan. Moreover, Japan is the biggest outlet overseas for American movies. An American movie that is highly successful in Japan can generate from 12% to 15% of the budget of the movie. Additionally, Americans also believe in the success of foreign movies. As the market expands, the U.S. movie industry encompasses a larger audience and, thus is more willing to invest in non-English language production. Americans invest overseas either to fight charges of cultural imperialism or just because some foreign movies are extremely profitable. Moreover, to increase their place on the global market, some major studios have spread their television channels around the world. Worldwide box office increased by 4.9% in 2007, reaching an all-time record. This result combined with the promising expansion of technology in the sector predicts an optimistic future for the industry.

## **2. LITERATURE REVIEW**

The new challenges related to technology led the industry to experiment crucial transformations. The increasing role of technology raises the production cost and thus allows a larger degree of bargaining power to big companies over the selection of films to produce. However, if technology increases to a point where it will become affordable for a producer to produce its own movie, through digitalization or other technology, then, the bargaining power will shift to producers and the worldwide range of movies offered will considerably increase (Zhu, 2003).

The 20<sup>th</sup> century has witnessed the transition from regular cinema to e-cinema and d-cinema. These two terms can be used interchangeably when referring to digital filmmaking and the use of digital content in other applications.

Through the utilization of technology, e-cinema allows reduction of production and distribution cost while improving image quality, distribution efficiency, and remote monitoring. The adoption of this new standard of image by theatre is not a complicated procedure since 24 frames per second is the picture rate already currently employed in movies theatres, however, it remains a slow process, which, once implemented “will pave the way for future implementation and ensure interoperability among servers and

decoders from various manufacturer” (Povolozky, 2004). According to Screen Digest, 30 % of the world’s screens will be able to support this new format by 2010, compared to only 5.5% of global theatre screens in 2008 (Hanley, 2008).

Finally, the Internet is a disruptive technology that will redesign the value chain of the movie industry. The Internet will compete with the current business model and challenge video rental and TV cable industry. The increasing place of the Internet in the movie market will decrease distribution costs and reach a global audience while lowering the distribution barrier (Zhu, 2003).

IT adoption is a slow process even though software and hardware can be implemented quickly at low cost. Typically, the U.S. movie industry is controlled by six majors companies, which business models rely on the ability to control where when and how customers are going to access movies. Usually, initially major companies show reluctance toward disruptive technology until they better understand how it will enhance the quality of their products and services to the customer (Johnson, Olivier, 2007). Furthermore, once majors decided to adopt a new technology, the same change must occur worldwide at the same time in order to avoid any diffusion barriers in such a global industry. Despite the attractiveness of foreign markets, the American movie industry faces some issues including differences in the technologies used. For instance, South Korean technology is more advanced than American technology. Also, the digital format currently in used in the movie industry allows high quality copies; as a result, illegal digital copies are distributed through the Internet; and consequently, profits are declining. Lastly, the strength of the U.S. dollar against all major currencies remains a problem (Aft, 2004).

### **3. CONCEPTUAL MODEL**

In 1985, Michael Porter was the first to introduce the concept of value chain as a reference model in a business environment. The primary objective of the value chain is to help businesses develop a competitive advantage and to find a strategic position in the market at every stage of the chain. A competitive advantage is the key value of any successful business as it allows adding more value to the product or service of the business involved. It also enables a company to differentiate itself in the market and to gain market share at the same time. Porter’s value chain distinguishes two types of activities. Primary activities refer to different steps from the creation of the product to its commercialization. Support activities gather the organization’s activities that will support the primary activities in the creation of a competitive advantage (Porter, 1985). Overall, the success of an organization relies on its ability to constantly redesign its value chain in order to achieve maximum competitive advantage. Moreover, every player at every stage of the value chain must constantly look for improving their own competitive advantage in order to vitalize the value chain and the organizational management (Mascarenhas, Kesavan, Bernacchi, 2004).

Technology led to radical changes of the original the value chain model. The integration of information technology (IT) at every stage of both primary and support activities of the value chain led to the redefinition and improvement of the Porter's traditional value chain. The E-value chain allows technology to support each activity of the traditional value chain with more flexibility. Technology redefined the existing links among the different players of the chain and led to a better flow of information. Depending on the industry, these improvements lead to a reduction of distribution cost, a facilitation of outsourcing, a wider range of products offered and better management of inventories. E-value chain adds value to every step of the value chain in order to create a stronger competitive advantage for the organization. The digitization of movies will enhance the efficiency of each step throughout the process of transformation and a significant reduction of cost. A movie, from its creation to its final destination successively follows three major steps: production, distribution, and exhibition. According to Michael Porter "a business is profitable if the value it creates exceeds the cost of performing the value activities" (1985, p.3).

The E- value chain is comprised of five primary activities and four supporting activities. The following section will analyze the assets of technology for each stage of the chain.

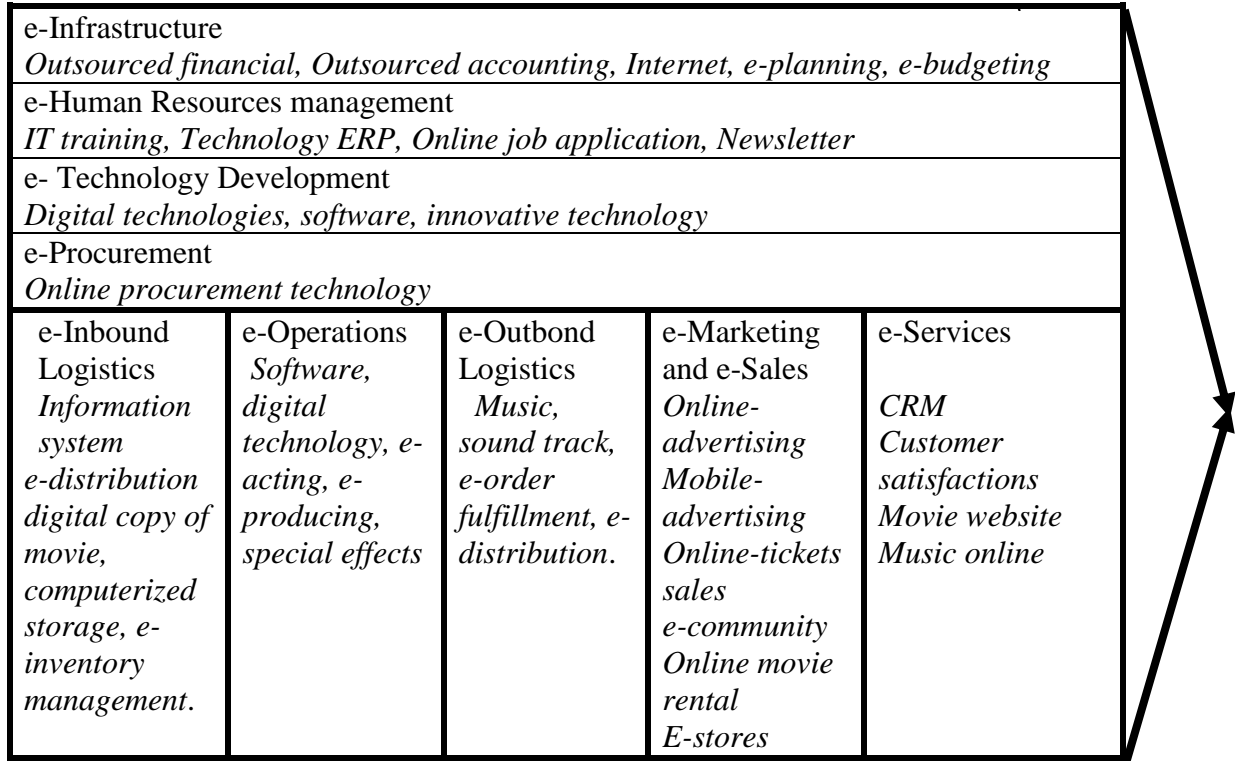
#### *1. Assets of technology for primary activities of the value chain*

- Inbound logistics and outbound logistics: IT will considerably reduce the cost for storing, inventory control, transportation, and distribution. The copies of the movie, used for the distribution are made during the production phase. The cost to duplicate a movie could be reduced by the use of digital film formats and Internet distribution. In addition, digital distribution will eliminate the larger part of distribution cost. Digital movies do not require the use for stock film, which will progressively eliminate the need for storage and inventory control.
- Operations: The high technology machines and powerful software will enhance the quality of the production and reduce cost at the same time. Digital technology is expected to reach the traditional image quality. Powerful software enables the producer to use more special effects at lower cost and reduce the risks involved in the production of a film; the perilous scenes are now recreated virtually (Kelleher, 2004).
- E-Marketing and E-sales: Online distribution of movies allows marketing to collect accurate information about the customer and then better adjust supply to demand. The powerful tools that the Internet offers to marketing and sales departments enlarge the range of audiences for movies. E- marketing such as mobile advertising can be outsourced.
- E-Service: Consumers have online access to any information related to a movie including show times, trailers, and tickets online. Moreover, The Internet also allows consumers to discuss the product online and guide them in their selection for a movie.

## 2. Assets of technology for support activities of the value chain

- E-Procurement: Movies produced with a digital camera do not require the use of film stock anymore. It reduces the purchase of input.
- E-Human resource management: The utilization of Software such as Enterprise Resource Planning (ERP) would help large movie company to manage the organization and storage of individual information (Pearlson and Saunders, 2006). Paperless environments often promise to reach a higher quality management of employees. Some part of the e-human resources management can be outsourced to foreign operators.
- E-Technological development: Research and development is expecting to create software that is more and more powerful and able to virtually replace real actors or to create amazing special effects. Moreover when research and development enables digital image to reach a higher quality, then, online rental movies or video on demand will strongly compete with movie rental stores. Research and development of software can be outsourced to emerging countries. India can be a strong partner for this activity.
- E-Infrastructure: Financial or accounting departments might easily be outsourced and communication across the company remains reliable with the use of the Internet or Intranets.

**Figure 1: IT Adopted E-Value Chain in the Movie Industry**



#### 4. METHODOLOGY

Good coordination of activities throughout the value chain relies on efficient communication among internal and external customers. There are four types of relationships, business-to-business (B2B), business-to-customer (B2C), customer-to-business (C2B) and, business-to-internal (B2I). The understanding of the applications inside the firm will allow analysis of the level of technology implemented in the company and develop solutions to enhance the efficiency of future operations through the use of technology. Table 1 suggests different e-business solutions that could be used in the future in the movie industry in order to fully take advantage of IT solutions.

**Table 1: Items on E-Business Applications for Movie Industry**

<b>Interaction</b>	<b>Variable</b>	<b>Application Items</b>
B2B	A1	<i>Online Database</i>
	A2	<i>Electronic payment system</i>
	A3	<i>Enterprise Resource Planning (ERP)</i>
	A4	<i>Security information management</i>
	A5	<i>E-procurement</i>
	A6	<i>Electronic data capture</i>
B2C	B1	<i>Online job applications</i>
	B2	<i>Online News letter</i>
	B3	<i>Online ticket sales</i>
	B4	<i>Video-on-demand (VOD)</i>
	B5	<i>E-survey</i>
	B6	<i>Customer relationship management (CRM)</i>
	B7	<i>E-community</i>
	B8	<i>E-DVD store</i>
	B9	<i>Online Games</i>
	B10	<i>Online movie information</i>
	B11	<i>Online press room</i>
	B12	<i>Music online</i>
	B13	<i>E-mobile advertising</i>
	B14	<i>Multilingual service</i>
C2B	C1	<i>Online feedback</i>
	C2	<i>Online job search</i>
	C3	<i>Online new talent display</i>
B2I	D1	<i>E-training</i>
	D2	<i>Digital technology</i>
	D3	<i>Email</i>
	D4	<i>Internet</i>
	D5	<i>Intranet</i>

Many of the IT solutions proposed require the utilization of software. The development of this software can be outsourced. India offers high quality, low cost operations. Moreover, the training required to implement the software can also be outsourced. Business-to-customer applications offer solutions that are implemented through the website of the movie company. Solutions mainly refer to e-service; in this case, the entire design of the website can be outsourced in order to develop a powerful website able to offer large range of services to customers. Moreover, the management of online job applications, job searches, feedback and the constant updating of the website information can also be accomplished by a foreign workforce.

Table 2 is a comparison of the e-business applications with nine activities in the e-value chain for the movie industry.

**Table 2: Relationship of items on E-Business Applications and E-Value Chain**

<i>Value Chain Activities</i>									
	<i>Inbound Logistic</i>	<i>Operation</i>	<i>Outbound Logistic</i>	<i>Marketing &amp; Sales</i>	<i>Service</i>	<i>Procurement</i>	<i>HR</i>	<i>Infrastructure</i>	<i>Technology</i>
<b>B2B</b>									
A1	X	X	X	X	X	X	X	X	X
A2	X	X	X	X	X	X			
A3	X	X	X	X	X	X	X	X	X
A4		X			X	X	X		
A5	X	X	X	X	X	X		X	X
A6		X		X	X		X		
<b>B2C</b>									
B1	X	X	X	X	X	X	X	X	X
B2			X	X	X			X	X
B3			X	X				X	X
B4		X		X	X			X	X
B5		X		X	X				X
B6				X	X			X	X
B7				X	X				X
B8			X	X	X	X		X	X
B9				X					X
B10				X					X
B11				X					X
B12				X					X
B13				X					X
B14	X	X	X	X	X		X	X	X
<b>C2B</b>									
C1		X		X	X		X		X
C2							X		X

C3							X		X
<b>B2I</b>									
D1							X		X
D2				X	X		X	X	X
D3	X	X	X	X	X	X	X	X	X
D4	X	X	X	X	X	X	X	X	X
D5	X	X		X	X		X	X	X

## 5. FINDINGS

Technologies are radically changing the movie landscape and subsequently changing the distribution market. Only the six largest companies are going to be further analyzed for the impact of IT on the major distributor companies of the industry. Table3 shows an analysis of how IT impacts the six companies and how they have applied technology in the different stages of their e-value and e-customer chains with respect to B2B, B2C, C2B, and B2I applications. Table 3 shows the rating on e-business solution achievement for the six movies companies leading the market in 2007. Each company is going to be assigned a grade based on its level of implementation of IT solutions. According to the score range, 0 indicates that the e-business solution is not implemented, 1 indicates the e-business solution is minimally implemented and 2 indicates the e-business solution is highly implemented.

**Table 3: Rating on Implementations of E-Business Applications for 6 Companies in Movie Industry**

Variable	Paramount	W. Bross	Buena Vista	Universal	Sony Picture	20 <sup>th</sup> Century Fox	Total	%
<b>B2B</b>								
A1	2	2	2	2	2	2	12	100.00
A2	2	2	2	2	2	2	12	100.00
A3	2	2	2	2	2	2	12	100.00
A4	2	2	2	2	2	2	12	100.00
A5	1	1	2	2	2	2	10	83.33
A6	1	1	1	1	1	1	6	50.00
Sub Total	10	10	11	11	11	11	64	88.83
<b>B2C</b>								
B1	2	2	2	2	2	2	12	100.00
B2	2	2	2	2	2	2	12	100.00
B3	2	2	2	2	0	2	10	83.33
B4	2	2	2	2	2	2	12	100.00



B5	2	1	0	2	1	1	7	58.33
B6	2	2	2	2	2	2	12	100.00
B7	1	1	1	1	0	0	4	33.33
B8	1	2	1	2	2	0	8	66.67
B9	2	2	0	0	2	0	6	50.00
B10	2	2	2	2	2	2	12	100.00
B11	2	2	1	1	1	1	8	66.67
B12	0	2	0	0	0	0	2	16.67
B13	2	0	0	0	2	0	4	33.33
B14	2	2	2	2	2	2	12	100.00
Sub Total	24	24	17	20	20	16	121	61.07
<b>C2B</b>								
C1	0	0	0	0	0	0	0	
C2	2	2	2	2	2	2	2	100.00
C3	0	0	0	0	0	0	0	
Sub Total	0	0	0	0	0	0	0	33.33
<b>B2I</b>								
D1	1	2	1	1	1	1	7	58.33
D2	2	2	1	2	2	2	11	91.67
D3	2	2	2	2	2	2	12	100.00
D4	2	2	2	2	2	2	12	100.00
D5	2	2	2	2	2	2	12	100.00
Sub Total	9	10	8	9	9	9	54	90.00

*a. B2B Data Analysis*

Table 3 shows that major movie distributors take great advantage of techniques existing to improve communication across industries. Technologies mainly rely on software that enhances the accuracy and the quality of the communication; the Internet increased the quality of relationships between distributor companies. Each company mainly benefits from the improvement in order to create competitive advantage and fully satisfy the service offered to their customers. Moreover, large companies can improve the quality of their services by using the Internet to obtain accurate information about their customers and thus develop better targeted marketing solutions.

*b. B2C Data Analysis*

Table 3 reveals 61% of IT solutions implemented were for the business-to-customer relationships. A further analysis of the results shows that only a few companies take advantage of mobile advertising (33%), music online (16%), online gaming (50%) and e-community (33%). These four components are resulting in advertising techniques aimed

to retain visitors' attention on the website, and also have them become more familiar to with movie market. Large companies can still improve their relationships with customers through these four avenues. However, the other solutions proposed are generally successful; large companies know how to take advantage of IT to meet customers' online demand. Large movie distribution companies offer services such as online ticketing (83%), newsletter (100%), e-store (60%) and video-on-line access (100%).

*c. C2B Data Analysis*

IT solutions enhancing the relationship among customer-to-business are weakly developed in the industry. Although the future of the movie industry is highly reliant on customer-to-business relationships, only the job application solution is greatly implemented through companies' web sites. As suggested through the definition of the e-customer chain, a business must rely on its customer feedback in order to enhance the quality of the product offered. Large movie industries focus too heavily on making profits and not enough on customer's needs. In the future it is recommended that the industry develop IT solutions to satisfy customer satisfaction and demand.

*d. B2I Data Analysis*

Large companies understand the need of a well-managed business in order to get the best results and motivation from its employees. Three out of the five solutions proposed dedicated to enhance communication among employees (internet, intranet, and email) and are fully implemented by each company analyzed. Digital technology will require some time to be fully implemented in the industry, as it requires time to train employees with these new technologies and to build the infrastructure able to efficiently receive this technology.

## **6. DISCUSSION AND CONCLUSION**

The increase of technology in the movie industry is likely to redesign the traditional model. Even though technology might lead to the loss of some players in the value chain and the customer chain, it enhances competition on the market and results in stronger competitive advantage. Technology advancement coupled with the Internet enable the industry to offer greater image quality of movies at a better convenience for the customer. These changes are currently occurring as technologies provide powerful tools and software. The industry is expecting to keep taking advantage of technology at every stage of the value chain and creates competitive advantage that the customer cannot possibly imagine. However, it is highly recommended that the industry does not hesitate to take the risk related to technology advancement and start as soon as possible, taking full advantage of all the opportunities offered by technology.

## **REFERENCES**

Available upon request