

3

Movie macroeconomics

You oughta be in pictures! – Ziegfield Follies, 1934

A more appealing pitch to investors would be hard to find. Many people imagine that nothing could be more fun and potentially more lucrative than making movies. After all, in its first four years, *Star Wars* returned profits of over \$150 million on an initial investment of \$11 million (and many millions more on re-release 20 years later). Nonetheless, ego gratification rather than money may often be the only return on an investment in film. As in other endeavors, what you see is not always what you get. In fact, of any ten major theatrical films produced, on average, six or seven may be broadly characterized as unprofitable and one might break even.¹ Still, there are many reasons why such characterizations must be applied with care and why the success ratio for studio-distributors is considerably better than that for individual participants.

Be that as it may, however, moviemaking is still truly entrepreneurial: It is often a triumph of hope over reality, where defeat can easily be snatched from the jaws of victory. But its magical, mystical elements notwithstanding, it is also a business, affected like any other by basic economic principles.

3.1 Flickering images

Snuggled comfortably in the seat of your local theater or, as is increasingly likely, in front of the screen attached to your video exhibition device, you are transported far away by your imagination as you watch – a movie. Of course, not all movies have the substance and style to accomplish this incredible feat of emotional transportation, but a surprising number of them do. In any case, what is seen on the screen is there because of a remarkable history of tumultuous development that is still largely in progress.

Putting pictures on a strip of film that moved was not a unique or new idea among photographers of the late nineteenth century. As noted by Margolies and Gwathmey (1991, p. 9), it was by then already known that the way we perceive motion in films is an optical illusion based upon the eye's persistence of vision; an image is retained for a fraction of a second longer than it actually appears.

Synthesizing it all into a workable invention, however, required the inventive genius of Thomas Edison. By the early 1890s, Edison and his main assistant, William Dickson, had succeeded in perfecting a camera ("Kinetograph") that was capable of photographing objects in motion. Soon thereafter, the first motion picture studio was formed to manufacture "Kinetoscopes" at Edison's laboratory in West Orange, New Jersey. These first primitive movies – continually looping filmstrips viewed through a peephole machine – were then shown at a "Kinetoscope Parlor" on lower Broadway in New York, where crowds formed to see this most amazing novelty that was dismissed by some as just a passing fad.

The technological evolution of cameras, films, and projection equipment accelerated considerably at this stage. In Europe, for instance, full-time cinemas proliferated in London after 1906, and France reigned powerfully in the initial growth of all global film-industry segments.² Entrepreneurs everywhere were quick to grasp the moneymaking potential in showing films to the public.

The early years in the United States were marked, however, by a series of patent infringement suits and attempts at monopolization that were to characterize the industry's internal relations for a long time. As Stanley (1978, p. 10) notes,

Movies were being shown in thousands of theaters around the country. . . . After years of patent disputes, the major movie companies realized it was to their mutual advantage to cooperate. . . . A complex natural monopoly over almost all phases of the nascent motion picture industry was organized in December 1908. It was called the Motion Picture Patents Company.

This company held pooled patents for films, cameras, and projectors, and apportioned royalties on the patents. It also attempted to control the industry by buying up most of the major film exchanges (distributors) then in existence, with the goal of organizing them into a massive rental exchange, the General Film Company.³

The Patents Company and its distribution subsidiary (together known as the “Trust”) often engaged in crude and oppressive business practices that fostered great resentment and discontent. But eventually the Trust was overwhelmed by the growing numbers and market power of the independents that sprang up in all areas of production, distribution, and exhibition (i.e., theaters). The Trust’s control of the industry, for example, was undermined by the many “independent” producers who would use the Patent Company’s machines, without authorization, on film stock that was imported.

Yet more significantly, it was from within the ranks of these independents that there emerged the founders of companies that were later to become Hollywood’s giants: Carl Laemmle, credited with starting the star system and founder of Universal; William Fox, founder of the Fox Film Company, which was combined in 1935 with Twentieth Century Pictures; Adolph Zukor, who came to dominate Paramount Pictures; and Marcus Loew, who in the early 1920s assembled two failing companies (Metro Pictures and Goldwyn Pictures) to form the core of MGM.

At around the same time, there began a distinct movement of production activity to the West Coast. Southern California not only was far for the Trust enforcers to reach but could also provide low-cost nonunion labor and an advantageous climate and geography for filming. By the mid-1920s, most production had thus shifted to the West, although New York retained its importance as the industry’s financial seat.

Hollywood had also by this time begun to dominate the world cinema, competing effectively against filmmakers in Europe, especially those in England and France. As Trumbour (2002, pp. 18–19) has noted, the U.S. industry exploited several advantages over its rivals: Even then it already had the world’s largest domestic market, composed of diversified immigrant cultures; it had a well-developed industrial organization, as compared with the largely artisanal production and distribution systems in other countries; and it had an ideology of optimism and happy endings, as compared with the often morose fade-outs of films made abroad.

By the late 1920s, though, the industry had been shaken by the introduction of motion pictures with sound and, soon thereafter, by the Great Depression. In that time of economic collapse, the large amounts of capital required to convert to sound equipment could only be provided by the Eastern banking firms, which refinanced and reorganized the major companies. Ultimately, it was the companies with the most vertical integration (controlling production, distribution, and exhibition) that survived this period intact. Those companies were Warner Brothers, RKO, Twentieth Century Fox, Paramount, and MGM. On a lesser scale were Universal and Columbia, which were only producer-distributors, and United Artists, which was essentially a distributor. The Depression, moreover, also led to the formation of powerful unions of skilled craftsmen, talent guilds, and other institutions that now play an important role in the economics of filmmaking.

Except for their sometimes strained relations with the unions, the eight major companies came out of this period of restructuring with a degree of control over the business that the early Patents Company founders could envy, and the complaints of those harmed in such an environment began to be heard by the U.S. Department of Justice. After five years of intensive investigation, the government filed suit in 1938 against the eight companies and charged them with illegally conspiring to restrain trade by, among other things, causing an exhibitor who wanted any of a distributor's pictures to take all of them (i.e., block booking them). By agreeing to a few relatively minor restrictions in a consent decree signed in 1940, the majors were, however, able to settle the case without having to sever the link between distribution and exhibition. Because of this, five majors retained dominance in about 70% of the first-run theaters in the country.⁴

Not surprisingly, complaints persisted, and the Justice Department found it necessary to reactivate its suit against Paramount in 1944. After several more years of legal wrangling, the defendants finally agreed in 1948 to sign a decree that separated production and distribution from exhibition.⁵ It was this decree – combined with the contemporaneous emergence of television – that ushered the movie business into the modern era (Table 3.1 and Figure 3.1).

3.2 May the forces be with you

Evolutionary elements

The major forces shaping the structure of the movie industry have historically included (1) technological advances in the filmmaking process itself, in marketing and audience sampling methods, and in the development of distribution and data storage capabilities using television signals, cable, satellites, video recorders, laser discs, and computers (including the Internet); (2) the need for ever-larger pools of capital to launch motion picture projects; (3) the 1948 consent decree separating distribution from exhibition; (4) the emergence of large multiplex theater chains in new suburban locations; and (5) the constant evolution and growth of independent production and service organizations. Each of these items will be discussed in the context of a gradually unfolding larger story.

Technology. Unquestionably the most potent impetus for change over the long term has been, and will continue to be, the development of technology. As Fielding (1967) has observed:

If the artistic and historical development of film and television are to be understood, then so must the peculiar marriage of art and technology which prevails in their operation. It is the involvement of twentieth-century technology which renders these media so unlike the other, older arts. (p. iv)

Table 3.1. *Chronology of antitrust actions in the motion picture industry, 1900–2014*

1908	Motion Picture Patents Co. established; horizontal combination of ten major companies that held most of the patents in the industry; cross-licensing arrangement
1910	General Film Co. purchased 68 film exchanges (local distribution companies) (vertical integration)
1914	Five film exchanges combined as Paramount to distribute films (vertical integration)
1916	Famous Players merged with Lasky to form major studio (horizontal integration)
1917	Famous Players–Lasky acquired 12 small producers and Paramount (vertical and horizontal integration)
1917	Motion Picture Patents Co. and General Film Co. dissolved as a result of judicial decisions and innovations by independents
1917	3,500 exhibitors became part of First National Exhibitors Circuit; financed independents, built studios (vertical and horizontal integration)
1918	Exhibitor combination formed in 1912 partially enjoined
1925	Series of federal suits brought against large chains of exhibitors for coercing distributors
1927	Paramount ordered to cease and desist anticompetitive practices
1929	Standard exhibition contract struck down as restraint of trade
1929	Exhibitor suit resulted in injunction against restrictive practices of sound manufacturers (talkies)
1930	Full vertical integration established as norm (production/distribution/exhibition); major exhibitor circuits given special treatment such as formula deals, advantageous clearances; studios owned supply of natural resources (stars)
1932	Uniform zoning protection plan for the Omaha distributing territory enjoined
1938	Start of a series of Justice Department antitrust actions against the industry (Paramount case I)
1940	Major studios entered into a series of consent decrees
1944	Justice Department brought Paramount case II, asked for divestiture of exhibition segment of major studios; District Court stopped short of divestiture but ordered other practices to cease; both parties appealed
1948–1949	Supreme Court (in effect) ordered divestiture; under jurisdiction of District Court, major studios divested themselves of their theaters and entered into consent decrees in other areas
1950–1999	Series of antitrust actions (private and federal) against various segments of the industry for past practices, violations of the consent decree, price fixing, block booking, product splitting, and other anticompetitive activities
2014	European Union antitrust agency investigates film and pay-tv licensing deals.

Figure 3.1. Film industry milestones, 1870–2014. Key events underlined.

In the filmmaking process itself, for instance, the impact of technological improvements has been phenomenal. To see how far we have come, we need only remember that “talkies” were the special-effects movies of the late 1920s; indeed, it was not until the 1970s that special effects began to be created with the help of advanced computer-aided designs and electronic editing and composition devices. *Titanic*, *Terminator 2*, *The Matrix*, *Avatar*, and *Spider-Man* are examples of films that would not and could not have been made without the new machines and methods. By the early 2000s, technological developments in digital distribution and exhibition allowed the industry to eliminate the need for bulky film reel shipments and to begin artistic creation in a three-dimensional environment (which is especially important in animated features). And already, special effects have advanced to the point where old stars can be realistically turned into younger versions of themselves and deceased personalities can be brought back to “life.”⁶

In addition, new technologies have enabled distributors to launch domestic marketing campaigns with much more speed and complexity than could have been imagined in the early years of the industry. Limited-sample audience reactions often begin to be tested through tracking surveys and models six weeks prior to the official release date, with the first weeks being the most important, as there is still some time for strategic adjustments, based on the sample’s responsiveness, to be made. Then, shortly after the picture opens in theaters, distributors and exhibitors now have the ability – using well-developed financial forecasting models – to closely estimate ultimate gross receipts (and thus profitability) potential.

The ready availability of television, cable, and newer mobile display formats has also been important in changing the movie industry’s economic and physical structure; film presentations in any of these media are competitive as well as supplementary to theatrical exhibitions, which historically constituted the core business. And advances in program distribution and storage capabilities have made it possible to see a wide variety of films in the comfort of our homes and at our own discretion. Such unprecedented access to filmed entertainment – enabling viewers to control the time and place of viewing – has redirected the economic power of studios and distributors and opened the way for new enterprises to flourish. As the rate of change in signal distribution technology (Internet bandwidth, for example) begins to outpace the rate of change in production technology, filmed-entertainment products and services are sure to become ever more personalized and adaptable.⁷

Capital. After technology, the second most important long-term force for change has been the packaging, and the application to the total process of production, distribution, and marketing, of relatively large amounts of capital. In this regard, financing innovations (as discussed in the next chapter) have played a leading role. Without the development of sophisticated financing methods and access to a broad and deep capital market, it is doubtful that the movie industry could have arrived at the position it occupies today.

From an economist's standpoint, it is also interesting to observe further that the feature-film business does not easily fit the usual molds. Industries requiring sizable capital investments can normally be expected to evolve into purely oligopolistic forms: steel and automobile manufacturing are examples. But because movies – each uniquely designed and packaged – are not stamped out on cookie-cutter assembly lines, the economic structure is somewhat different. Here, instead, we find a combination of large oligopolistic production/distribution/financing organizations regularly interfacing with and being highly dependent on a fragmented assortment of small, specialized service and production firms.

At least in Hollywood, energetic little fish often can swim with great agility and success among the giant whales, assorted sharks, and hungry piranha. Hollywood is always in flux, a prototype of the emerging network economy, assembling and disassembling itself from one deal and one picture and one technology to the next.

Pecking orders

Exhibition. Back in the 1920s, a 65-cent movie ticket would buy a few hours in a comfortable seat surrounded by the grandeur of a marbled and gilded theater palace in which complimentary coffee was graciously served while a string quartet played softly in the background. But those were the good old days.

The 1948 antitrust consent decree had a considerable impact on movie industry structure and product pricing because it disallowed control of the retail exhibition side of the business (local movie theaters) by the major production/distribution entities of that time.⁸ Disgruntled independent theater owners had initiated the action leading to issuance of the decree because they felt that studios were discriminating against them: Studios would book pictures into their captive outlets without public bidding.

However, the divestitures – ordered in the name of preserving competition – turned out to be a hollow victory for those independents. Soon after the distribution–exhibition split had been effected, studios realized that it was no longer necessary to supply a new picture every week, and they proceeded to substantially reduce production schedules. Competition for the best pictures out of a diminished supply then raised prices beyond what many owners of small theaters could afford. And by that time, television had begun to wean audiences away from big-screen entertainment; the number of movie admissions had begun a steep downward slide. The 1948 decree thus triggered and also hastened the arrival of a major structural change that would have eventually happened anyway.⁹

In the United States, exhibition is dominated by several major theater chains, including Regal Entertainment Group (United Artists, Edwards Theaters, Hoyts, and Regal Cinemas), AMC Entertainment, acquired in 2012 for \$2.6 billion by Chinese company Wanda Group (American Multi-Cinema, Loews Cineplex, including Sony, Plitt, Walter Reade, and RKO), Carmike

Cinemas, Redstone (National Amusements, Inc.), Cinemark USA, and Marcus Corp. In aggregate, these companies operate approximately 25,000 of the best-located and most modern urban and suburban (e.g., shopping mall) movie screens, with most of the other 15,000 or so older theaters still owned by individuals and small private companies. As such, the chains control about 60% of the screens, but they probably account for at least 80% of the total exhibition revenues generated.

In Canada, however, Cineplex (with names including Odeon, Galaxy, and Famous Players) is estimated to control about 65% of total annual theatrical revenues (with about 1,450 screens in 135 locations as of 2013). The Canadian market (in which Alliance Films is a major distributor) is roughly 10% the size of that in the United States.

In both the United States and Canada, construction of conveniently located multiple-screen (i.e., multiplexed) theaters in suburban areas by these large chains has more than offset the decline of older drive-in and inner-city locations and has accordingly helped to stave off competition from other forms of entertainment, including home video. The chains, moreover, have brought economies of scale to a business that used to be notoriously inefficient in its operating practices and procedures. As a result, control of exhibition has been consolidated into fewer and financially stronger hands, with the five largest companies (operating data shown in Table 1.7) together accounting for most of total industry dollar volume.¹⁰

Production and distribution. Theatrical film production and distribution has evolved into a multifaceted business, with many different sizes and types of organizations participating in some or all parts of the project development and marketing processes. Companies with important and long-standing presence in both production and distribution, with substantial library assets, and with some studio production facilities (although nowadays this is not a necessity) have been collectively and historically known as the “majors.”

As of the early 2000s, subsequent to many mergers and restructurings, there were six major theatrical-film distributors (studios): The Walt Disney Company (Buena Vista, Touchstone, Hollywood Pictures, and Pixar), Sony Pictures (owned by Sony and distributor of Columbia/TriStar), Paramount (Viacom Inc.), Fox (21st Century Fox, formerly News Corp.), Warner Bros. (Time Warner Inc.), and Universal (formerly MCA, Inc. and now part of Comcast).¹¹ These companies produce, finance, and distribute their own films, but they also finance and distribute pictures initiated by so-called independent filmmakers who either work directly for them or have projects picked up after progress toward completion has already been made.¹²

Of somewhat lesser size and scope in production and distribution activities are the so-called minimajors, such as Lions Gate, The Weinstein Company, and Relativity. (The now-defunct Orion Pictures, whose library was bought by MGM, had fit into this category, too, as did Miramax and DreamWorks when those were run by the founders, and as did New Line, part of Time Warner.) Many smaller production companies also often have significant

distribution capabilities in specialized market segments. Generally, such smaller companies would not handle theatrical product lines that were as broad as those of the majors, nor would they have the considerable access to capital that a major would have. Nevertheless, these smaller companies can occasionally produce and nationally distribute pictures that generate box-office revenues large enough to attract media attention.¹³

Several smaller, “independent” producers also either feed their production into the established distribution pipelines of the larger companies or have minidistribution organizations of their own. Many of these newer independents often finance their productions away from the majors and then, in effect, merely make distribution agreements with the larger studios (i.e., they “rent” the studio’s distribution apparatus). They thus retain much more control over a film’s rights and can build a library of such rights. In addition, many executive project development firms do not produce films but instead option existing literary properties and/or develop new properties for others to produce.

Small independent firms, sometimes called “states-righters,” will also still occasionally handle distributions in local and regional markets not well covered by the majors or submajors.¹⁴ Lions Gate and IFC are examples of significant independent distribution companies in the United States, with counterparts in overseas markets, where distributors of various sizes operate.

Although at first it may be a bit startling to learn of the existence of so many different production and service organizations, their enduring presence underscores the entrepreneurial qualities of this business. The many “independents” have been a structural fact of life since the industry began, and they add considerable variety and verve to the filmmaking process.

3.3 Ups and downs

Admission cycles

There has long been a notion, derived from the Depression-resistant performance of motion picture ticket sales, that the movie business has somewhat contracyclical characteristics (Figure 3.2). It may be theorized that as the economy enters a recessionary phase, the leisure-time spending preferences of consumers shift more toward lower-cost, closer-to-home entertainment activities than when the economy is robust and expansionary. If so, this would explain why ticket sales often remain steady or rise during the early to middle stages of a recession, faltering only near the recession’s end. By that stage, many people’s budgets are apt to be severely stretched and long-postponed purchases of essential goods (e.g., new cars) and services (e.g., fixing leaky ceilings) will naturally take priority over spending on entertainment. The performance of movie-ticket sales vis-à-vis the economy during recessionary episodes since 1929 is illustrated in Figure 3.3.

In fact, an important study of cycles in ticket demand (Nardone 1982) has indicated that the motion picture industry acts contracyclically to the

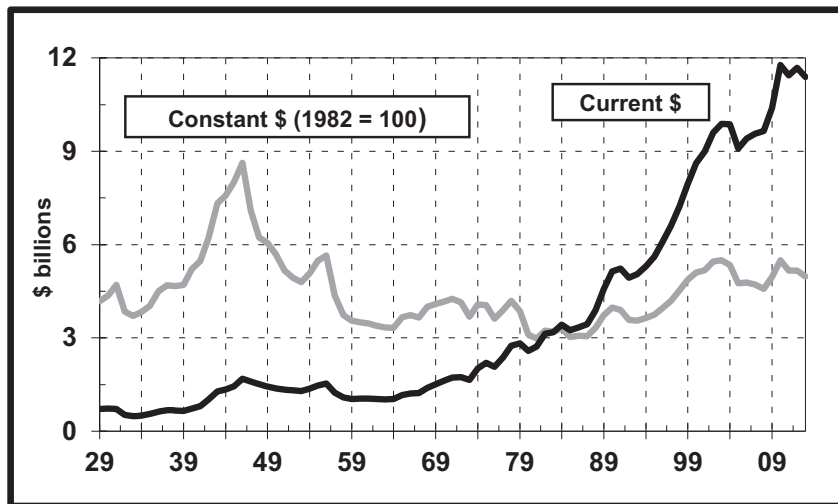


Figure 3.2. PCEs on movies, 1929–2013.

economy 87.5% of the time in peaks and 69.3% of the time in troughs. Also, there are suggestions that both a four-year and a ten-year cycle in movie admissions may be present, but the statistical evidence in this regard is inconclusive.¹⁵ And more recent research indicates that for at least since the 1980s film industry revenues have *not* been recession resistant.

Although seasonal demand patterns are not as sharply defined as they used to be (largely because there are now so many multiscreen theaters around the country), it is still much easier to discern and to interpret the seasonal cycles than the long-wave ones. Families in the United States find it

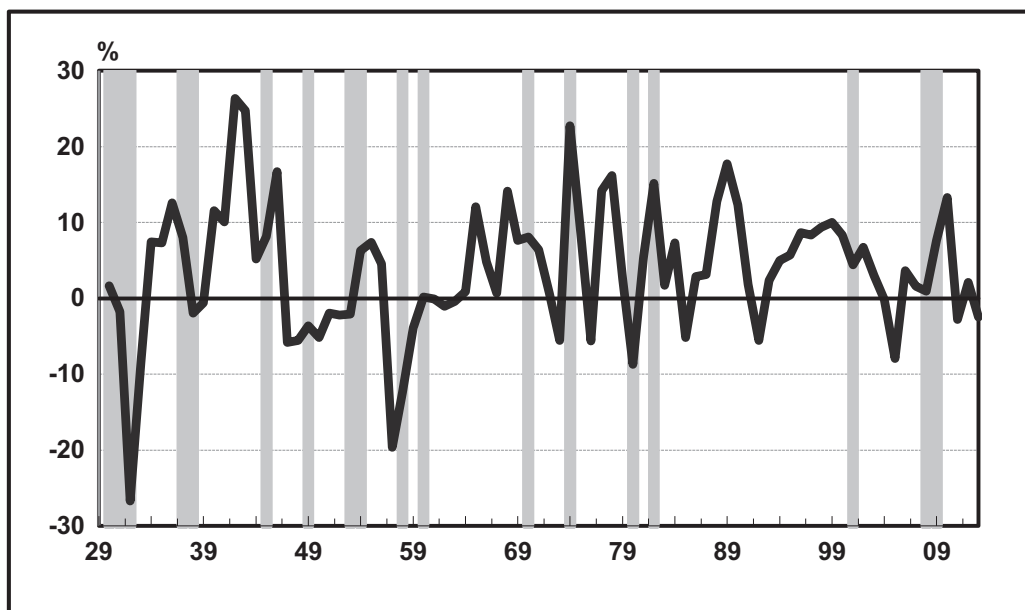


Figure 3.3. Motion picture receipts: percentage change over previous year's receipts, 1929–2013. Bars indicate periods of recession.

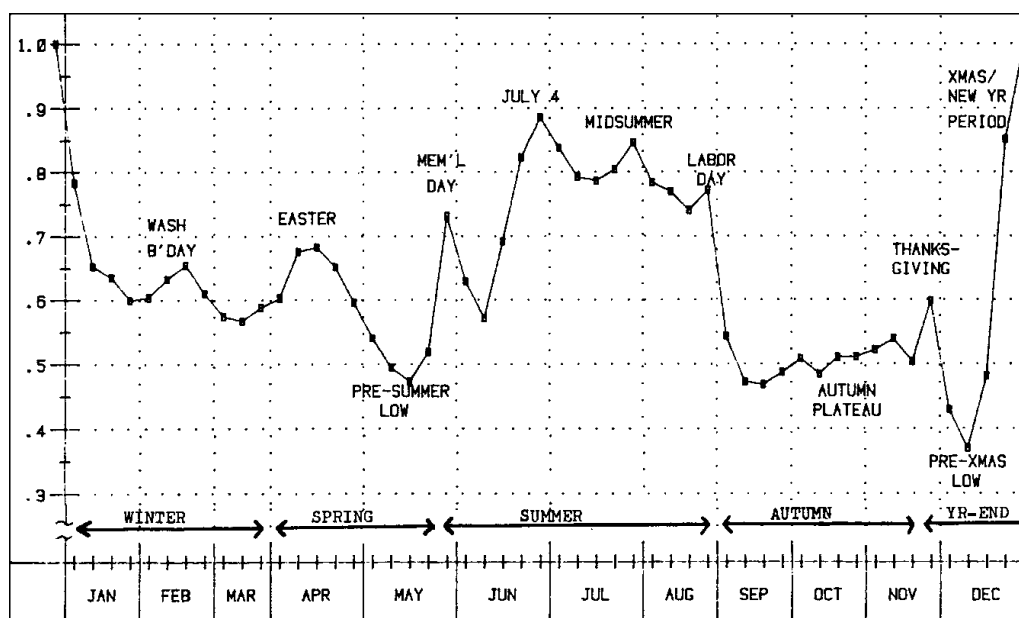


Figure 3.4. Normalized weekly fluctuations in U.S. film attendance, 1969–84. *Source:* *Variety*, copyright 1984 by A. D. Murphy.

most convenient to see films during vacation periods such as Thanksgiving, Christmas, and Easter, and children out of school during the summer months have time to frequent the box office.¹⁶ In the fall, however – which, by the way, is more important for European admissions – school begins again, new television programs are introduced, and elections are held; people are busy with activities other than moviegoing. And in the period just prior to Christmas, shopping takes precedence. Thus the industry tends to concentrate most of its important film releases within just a few weeks of the year. This makes the competition for moviegoers' attention and time more expensive than it would be if audience attendance patterns were not as seasonally skewed (see Section 4.4 on marketing costs). Normalized seasonal patterns are illustrated in Figure 3.4.

Prices and elasticities

Ticket sales for new film releases are often relatively insensitive to changes in box-office prices per se (because they are new), but sales may be more responsive to the total cost of moviegoing, which can include fees for complementary goods and services such as those for restaurant meals, transportation, and parking.¹⁷ Although demand for major-event movies, backed by strong word-of-mouth advertising and reviewer support, is essentially price-inelastic, exhibitors are sometimes able to stimulate admissions by showing relatively older features at very low prices during off-peak times (e.g., Tuesday noon screenings when schools are in session). Many retired and unemployed people, and probably bored housewives and truants,

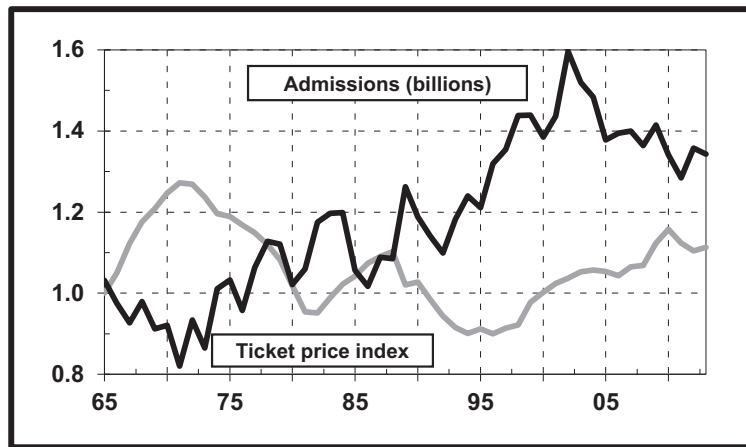


Figure 3.5. Motion picture admissions in billions and average real ticket-price index, 1965–2013.

like to take advantage of such bargains. There is, moreover, a widespread impression that ticket prices have risen inordinately. Yet, as Figure 3.5 indicates, movie-ticket prices, as deflated by the Consumer Price Index, remain a bit below the peak of the early 1970s.

In addition to price, many other factors – from story type, stars, and director to promotional budgets, demographics, ratings, awards, and critical reviews – will usually enter into the moviegoing (or video purchase/rental) decision. Viewed collectively, the economic studies that have been done in this area seem most of all to suggest that movie-audience tastes and responses to such different variables shift fairly often.¹⁸

Production starts and capital

In at least one respect, the movie industry is no different from the housing construction industry. The crucial initial ingredient is capital. Without access to it, no project can get off the ground. It should thus come as no surprise to find that the number of movies started in any year may be sensitive to changes in interest rates and in the availability of credit. To illustrate this relationship, a statistical experiment was conducted using the *Daily Variety* end-of-quarter production-start figures from 1969 to 1980, the quarterly average bank prime interest rate adjusted by the implicit gross national product (GNP) deflator for the same period, and the banking system's borrowed reserves (also deflated) as a proxy for the availability of capital. The results were as follows:

1. There may be a moderate, statistically significant inverse correlation, with at least a one-quarter lag, between real interest rates and the number of production starts.
2. There probably exists, with a six-quarter lag, an inverse relationship between production starts and borrowed reserves (credit availability) (Figure 3.6).

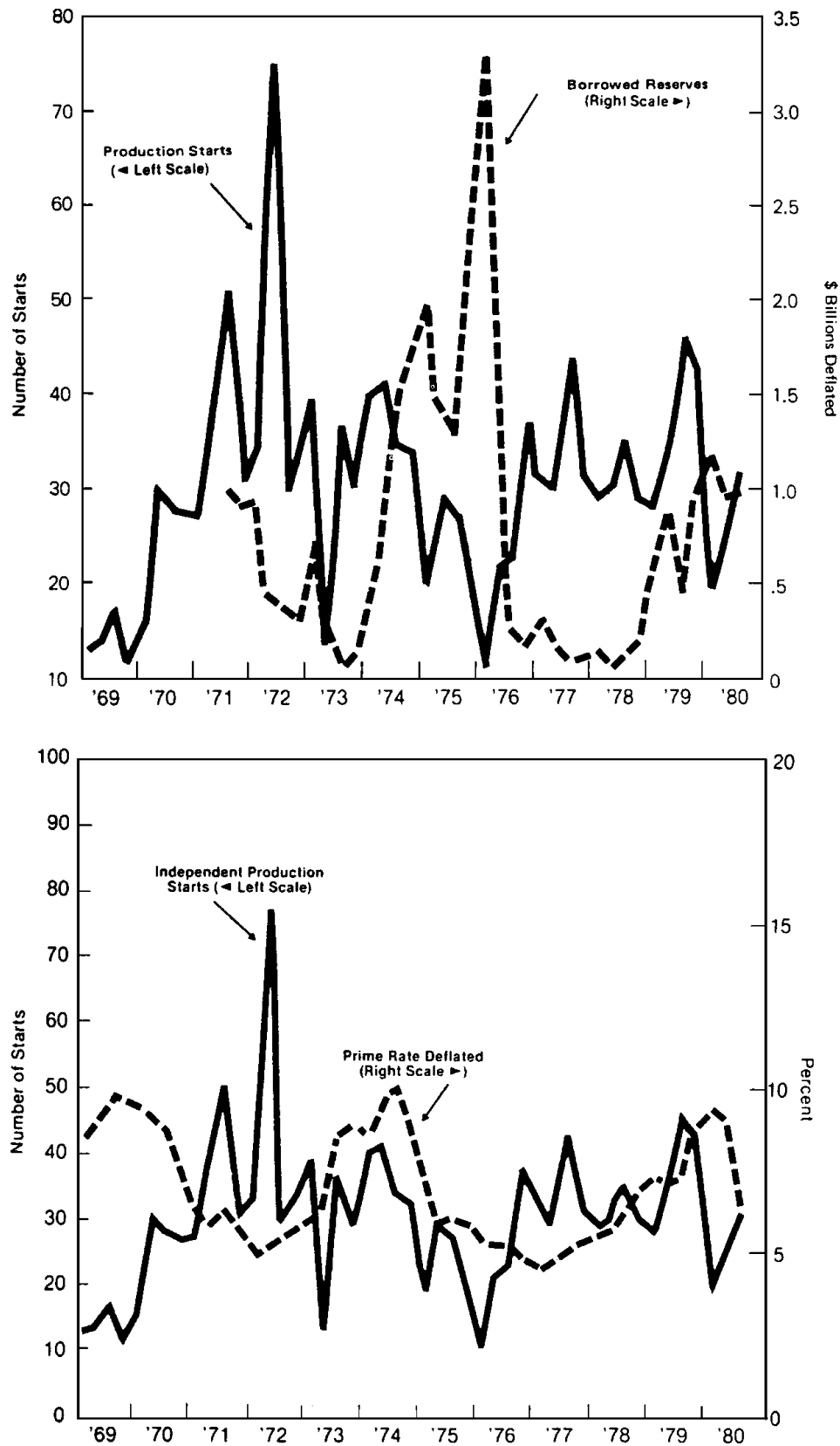


Figure 3.6. Production starts, interest rates, and borrowed reserves lagged six quarters, 1969–80.

That production starts should lag behind changes in the availability of capital by as much as six quarters should not be unexpected in view of the long lead time usually needed to assemble the many diverse components required for motion picture productions. Beginning with a rudimentary outline or treatment of a story idea, it can often take over a year to arrange financing, final scripts, cast, and crew. In total, it normally requires at least 18 months to bring a movie project from conception to the answer-print stage – the point at which all editing, mixing, and dubbing work has been completed.

Moreover, because the industry ordinarily depends on a continuous flow of cash, when credit is restricted by the Federal Reserve Bank (i.e., The Fed), sources of funding for movie projects rapidly dry up: Everyone in the long chain of revenue disbursement slows payments. And it becomes more difficult to effectively attract relatively scarce capital flows away from alternative uses that promise higher returns for less risk.

The cost and availability of credit with which to finance a project are thus often the most important variables affecting the amount of time that elapses from start to finish. Here, both independents and large studios would have similar concerns given that of the approximately \$22 billion of annual U.S. feature film revenue (from all sources, including DVD and TV sales), almost all must each year be redeployed (i.e., reinvested) in expenditures for new productions and marketing (i.e., ~ 200 films times $\sim \$100$ million per film).

No matter what the monetary environment, however, in theory (but not always in practice) only the worthiest of projects are supported, with the best concepts presumably first being offered to, and sometimes erroneously rejected by, the large studios/financiers/distributors. In this respect, it is significant that the number of potential film projects on Hollywood's drawing boards always far exceeds the number that can actually be financed. Parkinson's law applies as the number of projects will, regardless of quality, always expand to fully absorb the capital available and without regard to the quantity of other films scheduled for completion and release at around the same time.¹⁹

Other capital-intensive entertainment and media-related segments, which might include television show productions, cable and telecom infrastructure investments, casino and theme park projects, and major sports team purchases face similar issues. Media and entertainment sectors may thus be greatly affected by the Fed's monetary policy decisions, which are typically expressed by and implemented through changes in short-term interest rates and changes in long-term bond purchases or sales. Although the policies are intended to foster long-run employment growth and price-inflation stability, the Fed's power to influence economic events and outcomes is often limited.²⁰

Releases and inventories

Variations in production starts are eventually reflected in the number of films released (supplied) to theaters. In turn, the number of releases and the rate of

theater admissions influence industry operating profits. But it is difficult to estimate (using regression models) how large this effect may be; variations in the number of releases and admissions are not independent of each other, and aggregate profits are also influenced by the demand for filmed entertainment products in television, cable, and other markets.²¹

Sometimes, a more practical way to view the effects of changes in supply is through comparison of total dollar investments in film inventories against sales (i.e., film rentals). As in other industries, such comparisons often lead to the discovery of important economic relationships. For instance, a falling ratio of inventory to sales may be a manifestation of improving demand and/or of declining investments in production; either way, inventories become less financially burdensome to carry as cash is being recycled relatively rapidly.

Estimated inventory-to-sales figures for the major studios are shown in Table 3.2, where proper interpretation requires recognition that *many independently produced projects are carried off-balance-sheet* until release impends. The visible ratios – generally around 0.6 or higher in the 1980s and 1990s – are consequently somewhat akin to the tip of an iceberg, the size of which is often more easily gauged from the number of films rated each year by the Motion Picture Association of America (MPAA).²² Additional industry data are shown in Table 3.3.

Market-share factors

Many consumer-product industries rely on market-share information to evaluate the relative positions of major participants. However, because consumers have little, if any, brand identification with movie distributors (or most producers), and because market share tends to fluctuate considerably from year to year for any one distributor, such data generally have limited applicability and relevance. In the picture business, the approach is of necessity far different from market-share research for soaps, cigarettes, or beverages.

This kind of information therefore seems best suited for contrasting the effectiveness of major distributor organizations over the long term or for comparing a film's short-term rental performance in one region with that for another film in the same region. In long-term analysis, for example, averaging of Disney's share and those of other distributors over the years beginning in 1970 quantifies that company's significant erosion of market presence in the 1970s and subsequent rebound into the 1990s.

Collateral factors

Exchange-rate effects. Between 45% and 65% of gross rentals earned by the majors are now generated outside the so-called domestic market, which includes both the United States and Canada (about 10% of the U.S. total). Swings in foreign-currency exchange rates may therefore substantially affect the profitability of U.S. studio/distribution organizations.

Table 3.2. *Filmed entertainment industry operating performance, major theatrical distributors, 1975–2013*

	Revenues (\$ millions)	Operating income (\$ millions)	Margin (%)	Film inventory (\$ millions)	Inventory/ revenue (\$ millions)
2013	45,755	4,513	9.9	20,651	0.45
2012	45,360	4,158	9.2	20,425	0.45
2011	45,684	3,673	8.0	21,358	0.47
2010	45,127	4,345	9.6	19,764	0.44
2009	42,763	3,274	7.7	18,732	0.44
2008	44,884	4,461	9.9	18,333	0.41
2007	46,330	4,979	10.7	17,822	0.38
2006	46,005	3,853	8.4	18,413	0.40
2005	43,979	3,766	8.6	19,626	0.45
2004	44,799	4,474	10.0	18,881	0.42
2003	42,036	4,072	9.7	18,194	0.43
2002	37,808	3,064	8.1	18,771	0.50
2001	31,547	1,590	5.0	18,846	0.58
2000	29,416	900	3.1	22,959	0.78
1999	29,651	1,062	3.6	21,033	0.71
1998	29,468	2,153	7.3	20,412	0.69
1997	28,758	2,143	7.5	18,371	0.64
1996	25,644	1,884	7.3	16,404	0.64
1995	22,073	1,831	8.3	12,361	0.56
1994	19,850	927	4.7	12,288	0.62
1993	17,583	733	4.2	11,597	0.66
1992	16,147	1,302	8.1	10,374	0.64
1991	14,128	941	6.7	9,663	0.68
1990	12,676	1,103	8.7	8,127	0.64
1989	11,571	1,130	9.8	7,242	0.63
1988	9,121	1,151	12.6	5,089	0.56
1987	8,251	928	11.2	4,710	0.57
1986	6,839	799	11.7	4,458	0.65
1985	6,359	465	7.3	4,216	0.66
1980	3,997	489	12.2	1,423	0.36
1975	2,078	353	17.0	822	0.40
Five-, ten-, and fifteen-year compound annual growth rates					
2008–2013	0.39	0.23			
2003–2013	0.85	1.03			
1998–2013	2.98	5.06			

For instance, during most of the 1970s and after 1985, with the U.S. dollar relatively weak against major export-market currencies (Japanese yen, British pound sterling, Deutsche mark, French franc, and Swiss franc), studio profitability was significantly enhanced as movie tickets purchased in those

Table 3.3. *Motion picture theater industry statistics, 1965–2013*^a

	Total U.S. BO ^b revenues (\$ mm)	MPAA U.S. rentals ^c (\$ mm)	MPAA Canadian rentals (\$ mm)	MPAA U.S. rentals % of BO ^d	U.S. + Canadian rentals % of BO (%)	Foreign rentals (\$ mm) ^f	Worldwide (U.S. + foreign rentals)	Foreign as a % of total rentals (%)
2013	10,919.7	4,640.0	371.3	42.5	45.9	5,945.0	10,956.3	54.3
2012	10,810.8	4,585.0	367.6	42.4	45.8	5,620.0	10,572.6	53.2
2011	10,185.8	4,379.9	336.1	43.0	46.3	5,460.0	10,176.0	53.7
2010	10,579.1	4,549.0	328.0	43.0	46.1	5,200.0	10,077.0	51.6
2009	10,610.2	4,562.4	318.3	43.0	46.0	4,800.0	9,680.7	49.6
2008	9,791.0	4,210.1	293.7	43.0	46.0	4,590.0	9,093.9	50.5
2007	9,629.0	4,269.4	342.0	44.3	47.9	4,513.2	8,782.6	51.4
2006	9,138.0	3,970.2	335.4	43.4	47.1	3,975.6	7,945.8	50.0
2005	8,832.0	3,486.0	289.3	38.8	42.0	3,197.0	6,683.0	47.8
2004	9,215.0	3,600.0	279.7	37.7	40.7	3,837.0	7,480.0	51.3
2003	9,165.0	3,980.3	261.0	41.9	44.7	3,529.7	7,510.0	47.0
2002	9,272.0	3,575.0	242.0	37.6	40.1	3,140.0	6,715.0	46.8
2001	8,125.0	3,270.0	221.7	38.9	41.5	2,440.0	5,710.0	42.7
2000	7,468.0	2,850.0	189.3	37.2	39.7	2,630.0	5,480.0	46.8
1999	7,314.0	3,120.0	207.8	41.9	44.7	2,854.0	5,970.0	47.8
1998	6,760.0	2,787.0	174.1	40.1	42.6	2,908.0	5,695.0	51.1
1997	6,216.0	2,640.0	175.5	41.5	44.2	2,680.0	5,320.0	50.4
1996	5,817.0	2,417.5	146.7	40.9	43.4	2,504.0	4,921.5	50.9
1995	5,269.0	2,393.7	110.2	43.6	45.6	2,215.9	4,609.6	48.1
1994	5,184.0	2,040.3	126.8	37.8	40.2	2,048.8	4,089.1	50.1
1993	4,897.0	1,997.6	131.9	38.8	41.3	2,020.0	4,017.6	50.3
1992	4,563.0	2,005.0	130.4	41.2	43.8	1,439.1	3,444.1	41.8
1991	4,803.2	1,847.5	133.9	38.5	41.3	1,425.7	3,273.2	43.6

1990	5,021.8	1,829.0	148.3	36.4	39.4	1,649.5	3,478.4	47.4
1989	5,033.4	1,780.0	152.5	35.4	38.4	1,346.9	3,126.9	43.1
1988	4,458.4	1,413.6	125.2	31.7	34.5	1,020.3	2,433.9	41.9
1987	4,252.9	1,244.5	96.7	29.3	31.5	935.1	2,179.6	42.9
1986	3,778.0	1,165.1	86.8	30.8	33.1	798.3	1,963.4	40.7
1985	3,749.4	1,109.1	76.8	29.6	31.6	619.9	1,729.0	35.9
1984	4,030.6	1,313.2	111.0	32.6	35.3	654.0	1,967.2	33.2
1983	3,766.0	1,297.4	94.2	34.5	37.0	838.8	2,136.2	39.3
1982	3,452.7	1,342.7	99.8	38.9	41.8	718.6	2,061.3	34.9
1981	2,965.6	1,163.6	88.7	39.2	42.2	851.4	2,015.0	42.3
1980	2,748.5	1,182.6	91.5	43.0	46.4	911.2	2,093.7	43.5
1975	2,115.0	628.0	63.2	29.7	32.7	604.2		49.0
1970	1,429.0	381.3	27.4	26.7	28.6	360.4		48.6
1965	1,042.0	287.2	23.2	27.6	29.8	343.5		54.5
CAGR: ^e	4.3%	4.2%				5.1%		

^a Totals may be affected by rounding. Earlier editions of this book contain data for 1965–80 interim years.

^b Box office.

^c Motion Picture Association of America (MPAA) rentals are assumed to be about 95% of total U.S. rentals. Remainder is from non-MPAA member companies. Author's rentals estimates from 2008 to 2013.

^d Rentals percentage for United States is understated by 1% to 2% because state admissions taxes are not deducted from box-office figures.

^e Compound annual growth rate, 1980–2013 (%).

^f In traditional industry parlance, the term *domestic* includes U.S. and Canadian rentals. In this table, *foreign* includes Canada.

Table 3.3 (*cont.*)

	U.S. number of admissions (billions)	Avg. ticket price (\$)	Total number of MPAA releases	Total screens	Average per screen		Screens per new MPAA release
					Dom. BO (\$)	Admissions	
2013	1.343	8.13	114	39,783	274,482	33,762	349.0
2012	1.358	7.96	128	39,662	272,573	34,239	309.9
2011	1.285	7.93	141	39,580	257,346	32,457	280.7
2010	1.341	7.89	141	39,547	267,507	33,909	280.5
2009	1.415	7.50	158	39,233	270,440	36,073	248.3
2008	1.364	7.18	168	38,834,	252,124	35,124	231.2
2007	1.400	6.88	189	38,974	247,062	35,921	206.2
2006	1.395	6.55	204	38,415	237,876	36,314	188.3
2005	1.378	6.41	194	38,852	227,324	35,468	200.3
2004	1.484	6.21	179	36,594	251,817	40,553	204.4
2003	1.520	6.03	180	36,146	253,555	42,052	200.8
2002	1.597	5.81	205	35,280	262,812	45,266	172.1
2001	1.437	5.66	183	36,764	221,004	39,087	199.8
2000	1.385	5.39	191	37,396	199,701	37,036	204.3
1999	1.439	5.08	200	37,185	196,692	38,698	185.9
1998	1.438	4.69	235	34,168	197,846	42,086	154.6
1997	1.354	4.59	253	31,865	195,073	42,492	145.5
1996	1.319	4.42	240	29,731	195,654	44,364	138.3
1995	1.211	4.35	234	27,843	189,240	43,494	131.8

1994	1.240	4.18	183	26,689	194,237	46,461	160.8
1993	1.182	4.14	161	25,626	191,095	46,125	164.3
1992	1.099	4.15	150	25,214	180,971	43,587	178.8
1991	1.141	4.21	164	24,639	194,943	46,292	164.3
1990	1.189	4.23	169	23,814	210,876	49,912	150.7
1989	1.263	3.99	169	22,921	219,598	55,094	146.0
1988	1.085	4.11	160	23,129	192,762	46,902	151.2
1987	1.089	3.91	129	22,679	187,526	47,996	185.9
1986	1.017	3.71	139	22,765	165,957	44,683	171.2
1985	1.056	3.55	153	21,147	177,302	49,941	153.2
1984	1.199	3.36	167	20,200	199,535	59,361	132.9
1983	1.197	3.15	190	18,884	199,428	63,382	113.8
1982	1.175	2.94	173	18,020	191,604	65,228	120.1
1981	1.060	2.78	173	18,040	164,390	58,758	124.4
1980	1.022	2.69	161	17,590	156,254	58,073	131.3
1975	1.033	2.05	138	15,030	140,719	68,729	108.9
1970	0.921	1.55	185	13,750	103,927	66,982	74.3
1965	1.032	1.01	210	12,825	81,248	80,468	61.1
CAGR							
1980–2013	0.8	3.4		2.5	1.7	–1.6	

Sources: *Variety and Daily Variety* as based on MPAA-MPEAA data.

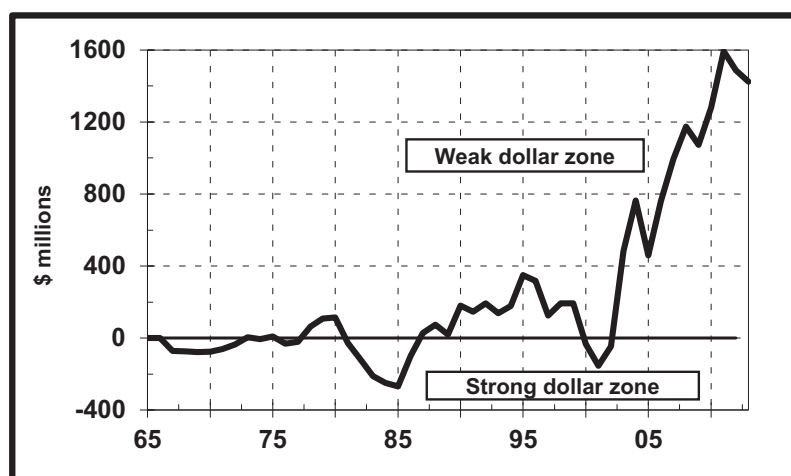


Figure 3.7. Film industry foreign theatrical rentals, estimated differentials for dollar exchange-rate effects, 1965–2013.

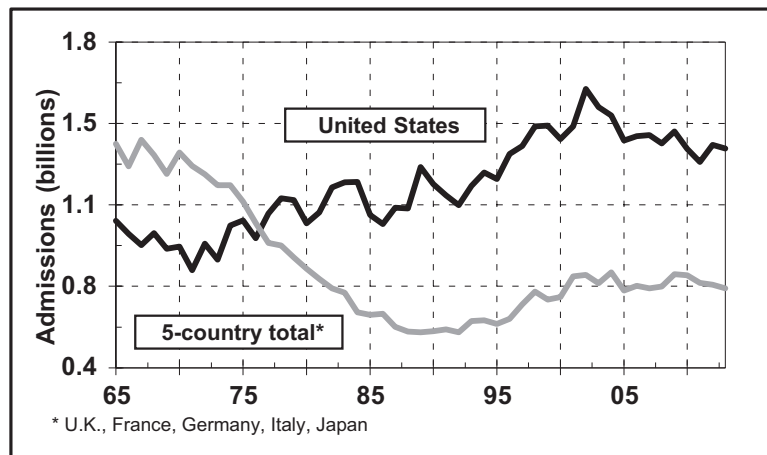
currencies translated into more dollars. Contrariwise, in the late 1970s and early 1980s, a strengthening dollar probably reduced the industry's operating profits by some 10% to 15% (\$100 million or so) under what would otherwise have been generated. In other words, although there is some countervailing effect from the higher costs of shooting pictures in strong-currency countries and from maintaining foreign-territory distribution and sales facilities in such locations, a weakening dollar exchange rate will, on balance, noticeably improve movie industry profitability.

Estimates of the importance of foreign-currency translation rates on industry profits are shown in Figure 3.7, from which it can be seen that a weakening dollar results in significant net benefit. Aggregate theatrical admissions in five developed countries are shown in Figure 3.8a, with theatrical admissions on a per capita basis and screen availability comparisons shown in Figures 3.8b and 3.8c.²³

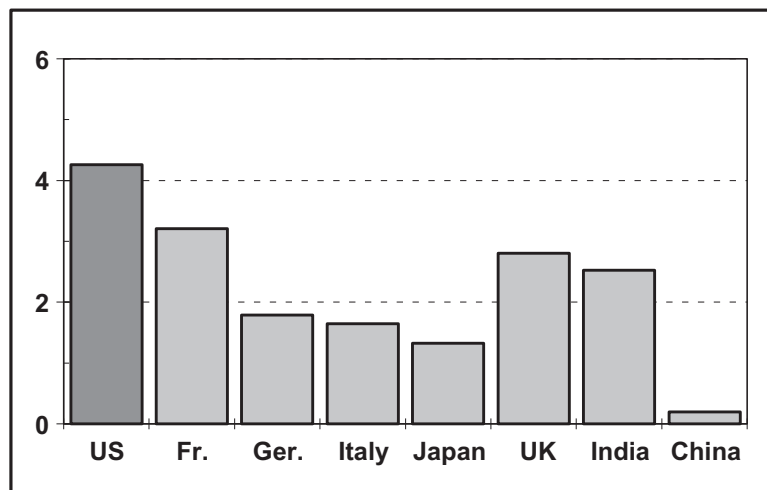
As of 2014, there were approximately 160,000 screens in the world, generating a global box-office total of around \$30 billion from estimated unit ticket sales (admissions) of 7.4 billion. Total feature-film production, representing investment of around \$28 billion, was approximately 5,000 titles, of which 1,200 were made in India.²⁴ China, too, now produces a large number of titles (~600 in 2014), but it no longer has the thriving independent film-industry structure that had been centered in Shanghai in the 1930s.²⁵

In all, the importance of international markets continues to grow, as can be seen from the large percentage of total world gross generated outside of North America. For instance, the percentages of total receipts from foreign markets for high-grossing (>\$750 million) films such as *Ice Age: Continental Drift*, *Skyfall*, and *Madagascar 3: Europe's Most Wanted* were 83%, 72%, and 71%, respectively.

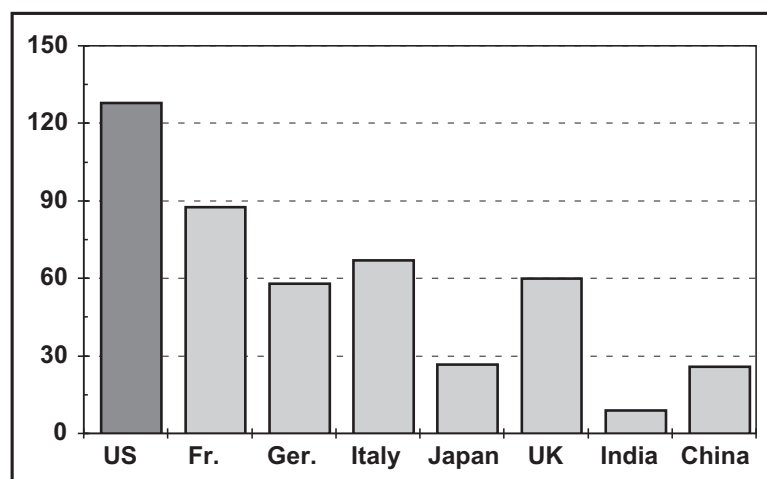
Trade effects. Although every region of the world produces and distributes film and television programming, the United States has long been the



(a)



(b)



(c)

Figure 3.8. (a) Theatrical admissions in the United States and in five major developed countries, 1965–2013. *Source:* Country statistical abstracts and MPAA data. (b) Admissions per capita, selected countries, 2013. (c) Screens per 1 million population, selected countries, 2013.

dominant exporter, with a net trade balance for these products of at least \$6 billion a year. This dominance can be explained as a function of historical happenstance, technological innovation, availability of capital, application of marketing prowess, and culture. Although much of this relates to early economist David Ricardo's theory of comparative advantage and also to what is known as the *Heckscher–Ohlin* theorem, the essential elements are that²⁶

- Movies and television programs have public-good/joint-consumption attributes wherein viewing by one consumer does not use up the product or detract from the enjoyment of other viewers.
- The home market in the United States is relatively large in terms of population and per capita or per household penetration of cinema screens, television sets, cable connections, and video playback devices – all of which provide relatively greater opportunity for cost amortization in the home market.
- The base language is English, the second most used after Mandarin Chinese, with the majority of its speakers residing in the wealthiest countries. This means that the “cultural discount” – the diminished value of an imported film or program resulting from differences of style, cultural references and preferences, and relevance – on shipping U.S. programming to other English-speaking countries is relatively small.²⁷

Given all these advantages, it seems unlikely that the export dominance of the U.S. feature-film business will be greatly eroded anytime soon. In television, however, application of new technologies and the development of regional production skills suggest that the U.S. share will probably continue to be gradually reduced.²⁸

Financial aggregates

The ownership of studios by a few large media corporations notwithstanding, the movie industry remains largely fragmented at its creative ends, where it still functions as if it were a small cottage industry. There are good economic reasons to believe that this will not change, if only because many small service firms and production units are already efficiently scaled and cost-effective in providing services to the major players.

The majors, nevertheless, still consistently generate the bulk of industry revenues (an estimated 90% of gross domestic film rentals), and when they have problems, so does everyone else in the business. The financial statements of these large companies accordingly provide, in the aggregate, a useful overall representation of the industry's financial performance trends. However, because entertainment companies often find it difficult to systematically match overhead and financing costs against revenues from specific sources, these data do not normally allow analysis of whether profit potential is greater in theatrical, television, or ancillary-market sales. Such issues are

Table 3.4. *Estimated ancillary revenues for an “average” MPAA-member film^a in 2014 (\$ millions)*

<i>Typical license fees or revenues per film^b</i>	
Pay cable	12.0
Home video (DVDs)	11.0
Digital distribution (via Internet)	3.0
Network TV licenses	2.5
Syndication	1.5
Foreign TV	3.0
Total	33.0

^a Per-film figures for ancillary markets represent the approximate going rates for representative pictures. However, they are not derived by dividing total ancillary-market revenues by an exact number of releases. Averages would, of course, be much lower if non-MPAA member films were included.

^b Also see Section 3.5, where it is explained why averages such as those used here require careful interpretation.

best addressed through an understanding of the microeconomic aspects of the business, which are discussed in the chapters that follow.²⁹

3.4 Markets – Primary and secondary

Theaters have historically been the primary retail outlet for movies and the place where most of the revenues have been collected and most of the viewing has occurred. But since the mid-1980s, the total fees from the licensing of films for use in ancillary markets (network and syndicated television, pay cable, and video) have collectively far overshadowed revenues derived from theatrical release. Table 3.4 illustrates what an “average” feature film released through a major distributor might receive from each of the ancillary markets as of the early 2000s.

Technological development, the driving force behind the transition to dominance by so-called ancillary markets, has led to sharp decreases in the costs of distributing and storing the bits of information that are contained in entertainment software. Yet it is still an open question whether such unit-cost decreases are in themselves sufficient to sustain the industry’s profitability.

An individual seeing a newly released feature film in a theater would, for example, ordinarily generate revenue (rental or gross) to the distributor of anywhere between \$4.00 and \$6.50. However, viewing on pay television, or from an Internet download, stream, or DVD, sometimes results in revenue per person-view of as little as 20 to 30 cents (Table 3.5). That happens when several people in a household watch a film at the same time, or when one watches several times without incurring additional charges.

Table 3.5. *Approximate cost of movie viewing per person-hour, 2014^a*

Theater (first-run, big cities)	\$6.50
Pay-cable channel	0.50
Home video	0.60
“Free” commercial television ^b	0.06

^a Assumes two-hour movie and two-person household.

^b Calculated by assuming \$30 billion in TV advertising divided by 2,555 (7 hours a day average viewing time × 365 days) × 100 million households.

It may, of course, be argued that in recent years declining average unit costs at home have had no discernible effect on theater admissions and that markets for filmed entertainment products have been broadened by attracting, at the margin, viewers who would not pay the price of a ticket anyhow. In addition, it seems that, no matter how low the price at home, people still enjoy the communal experience of seeing movies in a theater.

As sensible as this line of reasoning appears to be (it is platitudinous within the industry), there are several problems in accepting it without challenge. One of the most noticeable tendencies, for instance, has been the virtual dichotomization of the theatrical market into a relative handful of “hits” and a mass of also-rans. This can be seen from several recent peak-season box-office experiences, in which four out of perhaps a dozen major releases have generated as much as 80% of total revenues.

Although “must-see” media-event films are as much in demand as ever – and are now able to generate the bulk of their ultimate box-office take within the first three weeks of release – such dichotomization suggests that ticket sales for pictures that are of less immediate interest to audiences are probably being replaced by home screenings that on average generate much less revenue per view. The new home-video (and also portable device) options obviously allow people to become much more discriminating as to when and where they spend an evening out. And recent surveys strongly suggest that young people no longer necessarily regard theaters as the preferred medium for viewing films.³⁰

In other words, what is gained in one market may be at least partially lost in another: In the aggregate, ancillary-market cash flow is often largely substitutional. For example, extensive exposures on pay cable prior to showings on network television have sharply reduced network ratings garnered by feature-film broadcasts and the networks now accordingly bid much less than they used to for most feature-film exhibition rights.

In fact, contributions from new revenue sources appear to have been barely sufficient to offset rapidly rising costs of theatrical production and release. Between 1980 and 2013, for example, the estimated cost of the average

picture made by a major studio rose from \$9.4 million to perhaps \$95 million and average marketing costs soared from \$4.3 million to an estimated \$40.0 million. Returns on revenues (operating margins) have meanwhile fallen by at least one-third and have remained well below the peaks of the late 1970s.

Just as significantly, though, the existence of ancillary markets has enabled many independent producers to finance their films through *presales* of rights (that include those related to television and DVD distribution). As Goodell (1998, p. xvii) notes, an independently produced film may be defined as one “that is *developed* without ties to a major studio, regardless of where subsequent production and/or distribution financing comes from.” Or it is a project in which the producer bears some financial risk.

Such presales, often in the form of directly invested funds, guarantees, or commitments that may be used to obtain funds, will at times support projects that perhaps could not and should not have otherwise been made. Indeed, projects financed in this manner, routinely through sales of foreign rights, are often unable to generate cash flows in excess of the amounts required to cover the costs of production and release (marketing and prints).³¹

Companies largely relying on presale strategies manage to cushion, but not eliminate, their downside risks while giving away much of the substantial upside profit and cash flow potential from hits. Such companies will also inevitably have a relatively high cost of capital as compared with that of a major studio, if only because presale cash commitments (from downstream distributors) are generally relayed to the producer in installments. The producer will still usually need interim (and relatively costly) loans to cover cash outlays during the period of production and perhaps up until well after theatrical release. And, over the longer run, the few hits that firms of this kind might produce are often insufficient in number or in degree of success to cover their many losing or breakeven projects.³²

In brief, ancillary-market expansion has not as yet been (and may never be) fully translated into enhanced industry profitability. In essence, weak cost constraints, fragmentation of markets and audiences, and increased competition for talent resources have capped profit margins, incremental new-media revenue contributions notwithstanding.³³

Still, there can be no doubt that the new media have forever changed the income structure of the film business at large – with aftermarkets potentially providing much greater profit than the primary market itself. Table 3.6 illustrates that as recently as 1980, theatrical exhibition accounted for over half of all industry revenues. Thirty-five years later (Figure 3.9), theatrical exhibition accounted for less than a fifth of all such revenues, and TV licensing became the most profitable and reliable source of studio profits.³⁴

Although a distinct shift of preference away from “free” advertiser-supported programming and toward the direct purchase of entertainment in the form of movie tickets, pay-cable services, and video units (through either sales, rentals, or subscriptions) would, with all other things being held

Table 3.6. *Film industry sources of revenue: worldwide studio receipts, in US\$ billions (2007 dollars), 1948–2007*

Year	Theater	Video/DVD	TV ^a	Total	Theater share (%)
1948	8.5	-0-	-0-	8.5	100.0
1980	4.9	2.2	4.1	9.2	53.3
1985	3.3	2.6	7.4	13.3	24.8
1990	6.8	6.5	10.1	22.4	30.4
1995	6.2	11.9	11.6	29.7	20.9
2000	6.5	13.1	15.5	35.1	18.5
2005	7.0	22.6	16.9	46.5	15.1
2007	8.8	17.9	16.2	42.9	20.5

^a Includes both PPV and subscription pay TV and free TV (networks, cable, and local stations). In billions of 2004 dollars, free TV was \$3.35 in 1980, \$5.74 in 1985, \$7.6 in 1990, \$8.13 in 1995, \$11.03 in 2000, and \$12.60 in 2005.

Sources: Epstein (2005; 2010, p. 180), Slate.com, and MPAA.

equal, lead to a significant improvement in profitability, such a shift appears to be happening only gradually, if at all.³⁵ For the most part, the inherent uncertainties have instead created a constantly shifting jumble of corporate cross-ownership and joint-venture arrangements (Figure 3.10) that, in a scramble for control of content, distribution supremacy, and access to audiences, more often resemble hedged bets than bold and insightful strategic maneuvers.³⁶ These bets have sometimes generated below-average returns for shareholders.³⁷

Internet-based technology already provides viewers with unprecedented control over when and where entertainment may be enjoyed, it has already

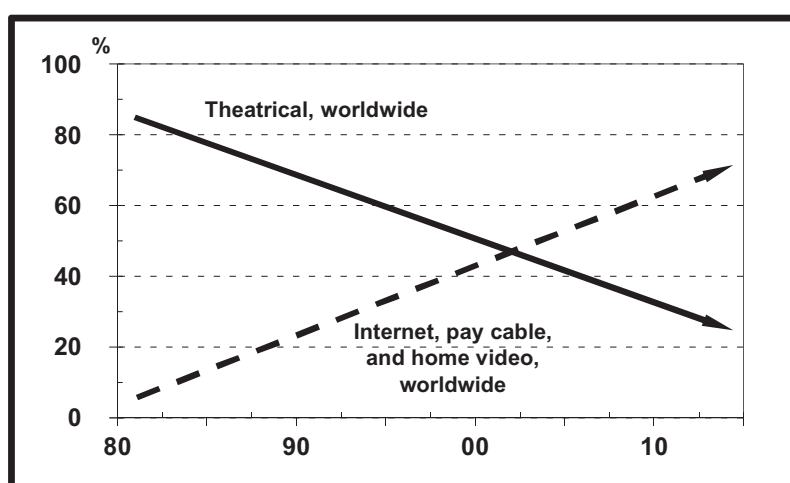


Figure 3.9. Trends in percentage of film industry revenue derived from feature-film exploitation in theatrical, home-video, Internet and pay-cable markets, 1980 and 2015.

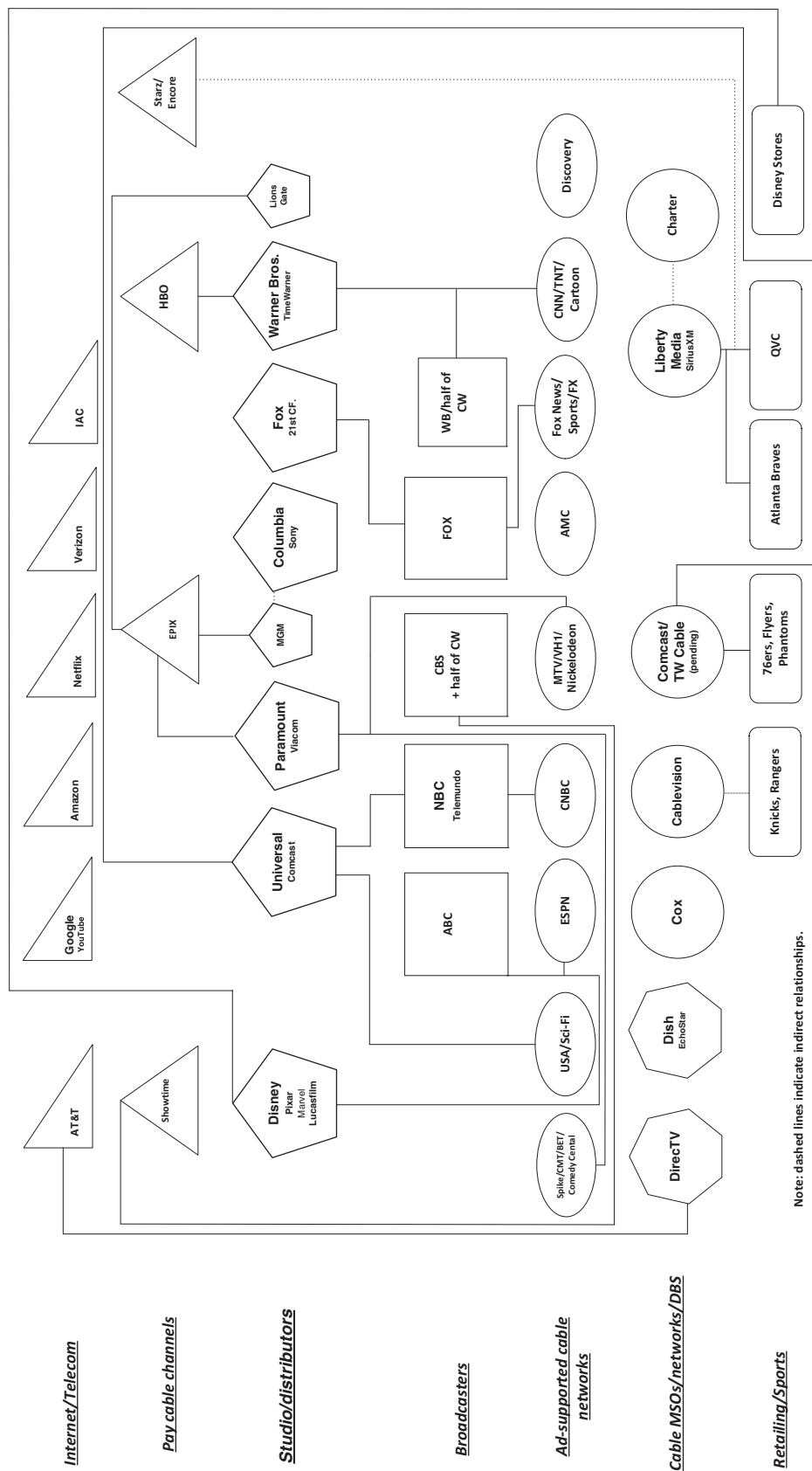


Figure 3.10. Significant entertainment company interrelationships, 2014. Dashed lines indicate indirect relationships.

appreciably lowered the price per view, and it further diffuses the economic power of the more traditional suppliers of programming. However, because new viewings invariably displace older ones, marketing costs remain inordinately high as the old and the new compete for the attention of wide-ranging, yet fickle, audiences.

3.5 Assets

Film libraries

More guesswork and ambiguity appear in the valuation of film library assets than in perhaps any other area relating to the financial economics of the movie business. Yet this topic is, nonetheless, of prime concern to investors who, over the years, have staked billions of dollars on actual and rumored studio takeovers. Twentieth Century Fox, United Artists, Columbia Pictures, and MCA Inc. (now Universal) have been among the many major acquisitions in an industry long rife with buyout attempts. Factors that might not at first glance be considered significant – technological advances, interest rates, legislative developments, recent utilization (depletion) rates, and prevailing social temper – all affect a library's perceived value.

Technology. Of all these factors, technological advances have been by far the most important and have generated the most controversy. Certainly the flourishing electronic media have increased the demand for programming, effectively providing opportunities to sell lots of old wine in a wide variety of new bottles. Nowhere is this more evident than with the legacy broadcast and film companies now respectively generating substantial incremental profits from retransmission consent deals (Chapter 7) and from licensing of content to ad-supported cable networks and to downloading/streaming services (e.g., Amazon, Netflix). The introduction of DVRs, smartphones, and computer tablets has turned out to be a boon, not a bane, for these companies.

Yet new entertainment delivery and storage technologies have made it possible for practically anyone to record programming conveniently, inexpensively, and often illegally. This capability has, to some unknown extent, adversely affected library values as consumers – using downloading and streaming services – now control or have ready access to millions of copies of once-scarce programming.³⁸ As in music, books, newspapers, and television shows, films are becoming available anytime, anywhere.

Utilization rates. The prior degree of public exposure (i.e., the utilization rate) of major features is a key element in valuation. Utilization-rate considerations, in particular, involve some interesting economic (and philosophical) trade-offs. For a library to be worth a lot, it cannot be exposed (i.e., exhibited) too frequently. However, to generate cash, and thereby to reflect its latent or inherent worth, it either must be licensed for exhibition or must be sold outright.

Table 3.7. *Approximate number of majors' feature titles as of 2015^a*

Studio	Approximate number of titles
Sony (Columbia/TriStar)	2,700
Disney	900
Paramount	1,300
Twentieth Century Fox	2,300
MGM (including Orion)	4,500
Universal	4,300
Warner Bros. (including New Line, pre-1987 MGM)	4,700
Total	20,700

^a Universal owns 1,000 pre-1948 Paramount features, and UA owns 745 pre-1950 Warner Bros. films. UA also owns free-TV rights to 700 pre-1950 RKO pictures.

Moreover, because the most recent pictures generally arouse the greatest audience interest, and thus at the margin amass the greatest amount of revenue, there is usually (except for those rare features deemed classics) a time-decay (perishability) element involved. In this regard, changes in social temperament may be important. A vault full of war epics, for instance, might be popular with the public during certain periods but unpopular during others. Some humor in films is timeless; some is so terribly topical that within a few years audiences may not understand it. In addition, because everything from hair and clothing styles to cars and moral attitudes changes gradually over time, the cumulative effects of these changes can make movies from only two decades ago seem rather quaint.

Of the more than 20,000 features in the vaults of Hollywood's majors (Table 3.7), it is therefore difficult to imagine (after considering the cost of prints and advertising) that more than just a few each year could be profitably reissued to theaters. Demand for older movies is not much greater on pay-cable channels, which generally thrive on new material. And syndicated television, long the main market for older features, also relies heavily on the relative handful of titles that have consistently proved strong enough to attract audiences.

In all, then, the structural constraints are such that the industry probably cannot in the aggregate regularly deploy in the domestic and foreign markets more than about 1,000 or so items (5%) a year from its full catalog of major features. (An estimated worldwide total is 500,000 movies and 3 million television shows and video clips.)

Interest and inflation rates. The effect of interest rates, the single most important external variable in valuation, can be best understood by

visualizing a portfolio of film-licensing contracts (lasting for, say, the typical three to five years) as entitling the holder to an income stream similar to that derived from an intermediate-maturity bond or annuity. As in the bond market, rising interest rates diminish a portfolio's value, and vice versa. In other words, the net present value (NPV) of a library is the sum of all discounted cash flows, risk-adjusted for uncertainties, that are estimated to be derived from the future licensing of rights or from outright sales of films in the group. A discounted cash flow concept of this kind may be mathematically presented in its most elementary form as

$$NPV_a = \sum_{t=0}^n A_t / (1 + r)^t,$$

where r is the risk-adjusted required rate of return (which is linked to interest rates), A is the estimated cash to be received in period t for film a , and n is the number of future periods over which the cash stream is to be received. Because it is often procedurally difficult to make precise estimates of revenues and net residuals and other participant costs more than a few years into the future, relatively large adjustments for risk must normally be assumed either directly in the formula (by raising the assumed r) or by further trimming of the calculated NPVs.

Inflation is, of course, one of many possible reasons for license fees to rise over time. But to the extent that license fees reflect general inflationary pressures, there is merely an illusion of enhanced worth. Another inflation illusion appears when people speak of "priceless" assets that are often priceless primarily in an artistic sense. Many animated Disney classics, for example, could not be made today at less than astronomical cost, and these pictures are widely considered to be "priceless." However, that does not necessarily mean that these films can consistently generate high license fees, DVD sales, or box-office grosses every year. Most of them, in fact, cannot.

Collections and contracts. Other factors entering into an evaluation process include questions of rights ownership and completeness. As in philately or numismatics, a complete collection of a series (e.g., all *Rocky* or James Bond or Marx Brothers films) is obviously more valuable than an incomplete set. Control over a complete series of related films (and their elements, such as original negatives and soundtracks, stills, one-sheets, and TV commercials) makes full marketing exploitation much more efficient.

Rights-ownership splits can, in addition, present especially nettlesome problems. To fully assess a library, many hundreds of detailed contracts signed over the span of many years – essentially, a chain of title (COT) – must be reviewed to determine the sizes of participations and residual payments, the licensability of rights (including copyright protections), and also any potential restrictions as to transferability. But because such contract stipulations are often not well documented (or, for that matter, made available to outsiders), most evaluations must be made at a distance from extrapolations

of what is known about available rights to a few key properties. The total number of films in a library may thus provide only a rough measure of its potential value.

Library transfers. From the outside, the most obvious method of determining what a library might be worth is to study previous asset transfer prices for comparable film portfolios. This approach, though, may be difficult to implement because library sales are fairly infrequent, prices are unreported, and the conditions under which such trades take place may differ significantly. The motives for transfer and the prevailing market sentiment for entertainment products at the time of transfer often carry great weight in establishing a transfer price. Even for two libraries of substantially the same size and quality, the prices may thus be greatly dissimilar.³⁹

From the information in Table 3.8, it can be seen that the going rate for a major feature film title has varied widely. It can also be said that the film-asset evaluation process is neither simple nor precise and is often more art than science. Estimation of values will often begin with a comparison of per-title prices of similar-quality libraries that have recently been transferred. Forecast cash flows must also always consider the physical condition of the film masters, the availability and transferability of rights, the potential costs of digitization, the participations and residuals that might be payable, and the possible effects of forthcoming technological changes. Discounted cash flow analysis broken down by revenue and territorial categories (theatrical, DVD, cable, etc.) can then be assigned probabilities that lead to a summation of expected values. In the end, though, as with assessments of beauty, value is often only a function of the beholder's imagination.

Real estate

For a long time, the Hollywood majors neglected and underutilized their real estate assets, which, prior to the 1948 consent decree and in the form of exhibition sites, provided important support collateral for bank production loans. However, such neglect is no longer in evidence.⁴⁰ By the early 1980s, studio real estate assets were in the middle of a steep valuation uptrend as proximity to major urban growth areas and the numbers of made-for-television movies, theatrical features, and cable productions rose to new heights.⁴¹

Compared with the downsizing of a generation ago, movie-company real estate assets are being actively managed and are becoming more impressive all the time. The scope of those assets extends to more than 27,500 acres owned by Disney in Orlando, to the 420 acres owned by NBC Universal at their headquarters and studio tour in Los Angeles, and to the 140 acres in Burbank owned by Warner Bros. (Time Warner).

As always, real estate values in Hollywood or elsewhere will be sensitive to changes in interest rates and to growth rates of the economy as a whole. Nevertheless, anticipated rising demand for new entertainment-software

Table 3.8. *Selected film library transfers, 1957–2013^a*

Year	Assets transferred	Sold by	Bought by	Approximate price
1957	700 Warner Bros. features, shorts, cartoons	Associated Artists	United Artists	\$30 million
1958	750 pre-1948 features	Paramount	MCA	\$50 million
1979	500 features	American International Pictures	Filmways	\$25 million
1981	2,200 features, shorts, studio, and distribution system	Transamerica	MGM	\$380 million
1981	1,400 features, Aspen Skiing, Coke Bottling, Deluxe Film Labs, 5 TV stations, International Theater Chain, studio real estate	Twentieth Century Fox	Marvin Davis, private investor	\$722 million
1982	1,800 features, studio property, TV stations, arcade games manufacturing	Columbia Pictures	Coca-Cola	\$750 million
1982	500 features	Filmways	Orion Pictures	\$26 million
1985	4,600 features, 800 cartoons, shorts, Metrocolor Lab, studio property	MGM/UA Entertainment (K. Kerkorian)	Turner Broadcasting (T. Turner)	\$1.5 billion
1985	950 features, distribution system, and other rights to MGM library	Turner Broadcasting	United Artists (K. Kerkorian)	\$480 million
1989	2,400 features and 20,000 TV episodes plus distribution system, 800 screens, and other rights	Columbia Pictures Entertainment and Coca-Cola	Sony Corp.	\$4.8 billion ^b
1990	3,100, features, 14,000 TV episodes	MCA Inc.	Matsushita Electric	\$6.1 billion ^c
1993	200 features	New Line	Turner Broadcasting	\$500 million
1994	900 features, 4,000 TV episodes, 1/2 USA network, teams, TV stations, publishing	Paramount	Viacom Inc.	\$9.6 billion
1995	3,200 features, 14,000 TV episodes	Matsushita ^d	Seagram Co., Ltd.	\$5.7 billion
1996	1,500 features and 4,100 TV episodes	Credit Lyonnais	K. Kerkorian/ Seven Network	\$1.3 billion
1997	2,000 features	Orion/Samuel Goldwyn	Metro-Goldwyn-Mayer	\$573 million
2003	7,000 features	Artisan	Lions Gate	\$210 million
2006	59 features	DreamWorks	Paramount (Viacom)	\$1.5 billion
2010	700 features	Miramax (Disney)	Colony Capital	\$660 million
2012	20 features	Summit	Lions Gate	\$412 million

^a Several other transactions or proposed transactions reflect library values. In 1985, a half interest in Twentieth Century Fox was obtained by Rupert Murdoch for \$162 million in cash and an \$88 million loan, equivalent to about \$180,000 a title if real estate, studio assets, and distribution are assumed to compose half of the asset valuation. In 1982, the pre-1948 Warner Bros. library, including 745 features, 327 cartoons, all the outstanding syndication rights, and the MGM/UA music publishing business, was almost sold to Warner Communications for around \$100 million. Adjusting for the nonfilm assets in the proposed sale would indicate a per title average of somewhat under \$100,000 a title.

^b Includes assumed of debt of \$1.4 billion. In addition, subsequent buyout of Guber-Peters Entertainment assets required several hundred million dollars more.

^c Includes recorded music, theme parks, and publishing.

^d Matsushita retained 20% equity interest.

production facilities and completion of ambitious property-development plans suggest that these assets have become significant in the financial analysis of film companies and their corporate parents.

3.6 Concluding remarks

Films are a unique art form because – unlike any other form – they are often able to powerfully transport our emotions and envelop us entirely.⁴² Still, this chapter's macroeconomic view of the movie industry suggests that many of the things that affect other industries – economic cycles, foreign exchange rates, antitrust actions, technological advances, and interest rates – also affect profits and valuations here. From this angle, moviemaking is a business like any other. How the film business differs from other businesses will more easily be seen from the microeconomic and accounting perspectives that are presented in the next two chapters.

Notes

1. According to the British Film Institute 2013 *Statistical Yearbook*, in “[U]sing an international box office to budget ratio of 2 or more as an approximate measure of profitability, overall 7% of domestic UK films and UK co-productions produced from 2003 to 2010 were profitable.”
2. As Putnam (1997) notes, in Europe development was spearheaded by the Lumière family and by the “industrialization” of the business by Charles Pathé. It was the Europeans who early on began to regard cinema as a cultural art form. As Roud (1983, p. 7) notes and probably exaggerates, by 1914 the French had captured 90% of the world's film market, but by 1919 this share had dropped to 15%. Still, in London Kinetoscope peepshow machines, including a venue on Oxford Street, had been operating commercially as early as 1895 – that is, before the 1896 premiere of the Lumière brothers' Cinématographe and Robert Paul's Theatrograph systems. See also Chapter 9 in Trumpbour (2002), and Quigley (1969), in which the earliest roots of film photography are covered and the projection of images onto a screen is traced back to around the year 1645 and the magic lantern of the German priest Athanasius Kircher. Bakker (2008, 2012) also covers the historical impact of the film industry as it relates to productivity and industrialization, and Thomson (2012) provides a broad historical overview.
3. Emergence of film exchanges moved the industry away from the purchasing to the leasing of films. This increased the turnover of titles and also the pool of available films for nickelodeons.
4. At around the same time, consolidation of production, distribution, and exhibition in England was being spearheaded by J. Arthur Rank, who, as Trumpbour (2002, p. 179) notes, indirectly benefited from provisions in the British 1938 Cinematograph Films Act (i.e., quota legislation). More detailed accounts of the economic history of film are also given in Sedgwick and Pokorny (2005).
5. Bruck (2003, p.112) cites Putnam (1997) in noting that in 1948 investments in cinemas accounted for 93% of the total industry capital investment and that productions only accounted for around 5%. Studios were thus effectively real estate companies that used the cinema holdings as loan collateral for underwriting of production and distribution

activities. The Consent Decree therefore precipitated a wrenching change in Hollywood's basic business model.

6. See Pomerantz (2010).

7. This argument was advanced early by Gilder (2000). For a review of the history of innovation and attempts to resist it, see Kirsner (2008).

8. On antitrust effects on movie industry pricing, see Orbach (2004) and Thorton (2009) at <http://mises.org/daily/3437>.

9. This and other aspects of the industry's long and colorful history are recounted in books such as those by Balio (1976), Knight (1978), and Stanley (1978).

10. The exhibition industry continues to consolidate, with values in this business calculated in terms of EBITDA multiples. At the height of the bidding in the 1980s, multiples for properties in large cities ranged from 10 to 14 times projected cash flows. But many properties in smaller cities had typically been priced at only 5 or 6 times. Also, although many big-city purchase prices averaged well over \$1 million per screen, transfer prices per screen averaged just below \$500,000 during the 1980s. By 2000, overbuilding of expensive theaters with stadium seating had caused most of the major chains to declare bankruptcy.

11. Tri-Star Pictures was a new studio formed in 1982 by Columbia (Coca-Cola), CBS, and Home Box Office (see Sansweet 1983), with equal initial capital contributions totaling \$50 million. Prior to a public stock and debt offering in 1985, the principal shareholders contributed another \$50 million. CBS soon thereafter, however, sold its interest, whereas Coca-Cola increased its share of ownership. In late 1987, Coca-Cola merged the former Embassy Pictures and Merv Griffin Enterprises television properties into Tri-Star and renamed the whole package Columbia Pictures, while retaining a 49% interest in the total entity. All of Columbia was then bought by Sony, the Japanese electronics giant, in November 1989. Universal, originally MCA Inc., went through several hands, from Seagram in 1995 to Vivendi in 2000, to GE/NBC in 2003, and then to Comcast (51% owned/ GE 49%) in December 2009. MGM was sold as a film library play in 2004 to a group led by Sony in a buyout partially financed by Comcast. Details leading to the eventual bankruptcy of MGM appear in Spector and Schuker (2010).

12. Although distributors like Disney and Warner Bros. are capable of handling between 40 and 60 titles a year, they are normally not interested in handling that many films.

13. Two large companies that made feature films, CBS and ABC, reentered production (but not distribution) in the early 1980s after a hiatus of about ten years. Both companies had produced movies in the late 1960s and early 1970s, but after sustaining substantial losses they had withdrawn from the field. CBS originally distributed its Cinema Center Films (e.g., *My Fair Lady*) through National General Corp., and American Broadcasting's ABC Pictures used a now-defunct subsidiary of Cinerama (Cinerama Releasing). By 1984, however, both companies had again withdrawn from theatrical production. The new CBS, split off from Viacom in 2006, has returned to relatively low-budget, limited production.

14. The term states-righters was appropriately applied at a time before national distribution networks had become fully operational.

15. Contracyclicity of ticket demand was studied by Albert Kapusinski (see Nardone 1982), who matched 42 economic measures of the motion picture industry for the 1928–75 span against similar variables used to assess the performance of the whole economy. The variables were then subjected to five tests of cyclical movement and led to the results cited. See also Hofler (2009b).

Preliminary experiments using spectral-analysis techniques hint at the possibility of a four-year cycle and a ten-year cycle in movie admissions, but, as noted, the statistical evidence is inconclusive. A more heuristic approach based on unit ticket sales and general

operating conditions also seems to suggest the possible existence of a 25-year cycle. Spectral-analysis references include Koopmans (1974) and Gottman (1981).

16. Such seasonal relationships remain consistent over long periods. For instance, between 1983 and 1992, the summer box office as a percentage of the year's total ranged between 35% and 41% and averaged 37.8%. See also Einav (2007, 2010) and Rampell (2013).

17. I found a reasonable estimating relationship of ticket sales for 1965 through 2012 to be

$$\begin{aligned}\text{Log}(\text{TICNUMB}) = & -5.84 - 0.44*\text{log}(\text{TICPRICE}) + 1.07.*\text{log}(\text{YDPERCAP}) \\ & -0.42*\text{log}(\text{TRANSPORTINTRA}) - 0.33*\text{log}(\text{FASTFOOD}),\end{aligned}$$

where TICNUMB is annual movie admission tickets sold, TICPRICE is actual current dollar average ticket price, YDPERCAP is current dollar per capita U.S. annual disposable income, TRANSPORTINTRA is a price index for intracity transportation cost, and FASTFOOD is the all-city consumer price index for food away from home. Fast food was found to be a useful proxy for incidental costs for a movie night out. Tests of other indices such as for gasoline, parking, number of screens, number of new MPAA films, and video (including tapes and DVDs) did not add explanatory power. All coefficients were statistically significant at 1% or less (except for fast food, which was at 5%), and the adjusted R^2 was 0.87, with a p -value of 0.00 for the F -statistic. The only econometric issue of note was the Durbin–Watson statistic of 1.42, which indicates that there might be borderline positive serial correlation bias. See also Hand (2002), who investigated the distribution of admissions and provided an ARIMA forecasting model, Pautz (2002) for a model using different variables, and Cieply (2011a).

18. Determinants of theater attendance and video rental demand were studied by De Silva (1998), who found that a movie's director, advertising, and reviews, and the viewer's age and marital status, were significantly related to attendance. Other similar studies are in Sochay (1994) and Litman (1998).

19. Eller and Friedman (2008) discuss how a glut of films financed by money from hedge and private equity funds affected the industry in this way in 2008.

20. Details on Fed policies appear in Vogel (2010) and in its forthcoming second edition.

21. Regression models attempt to explain, via statistical testing based on probabilistic assumptions, the extent to which some variables affect others. For example, a mathematical relationship might be in the form of an equation indicating that aggregate industry profit (the dependent variable) is a function of the number of admissions and the number of releases (the independent variables).

22. The number of films rated by the MPAA is published each year in *Variety*.

23. These comparisons would suggest that significant marketing opportunities may be available in foreign markets. However, it is not enough for a country to have a large population base. For example, even with the large population bases in Russia and China, theater ticket prices are relatively low, so that a large number of admissions are needed to generate an important amount of income for the major studios or exhibitors.

24. Timmons (2008) discusses India's interest in Hollywood investment, but notes that "Bollywood" films are much less costly than Hollywood's. A large-budget production in India would be \$4 million, with the largest being \$20 million. Also half the cost there goes to fees for actors and directors. Film financing has also not been transparent, with some still coming from organized crime and black market sources, though the majority of funding is now reportedly from "legitimate" sources.

25. See B. Wallace (2005) and Johnson (2010) about the growth of the domestic Chinese film industry, which in 2011 generated around \$2.0 billion in ticket sales, even with policies

limiting the number of imported films to 20 a year (as of 2014, this number had been raised to 34). China's market surpassed South Korea's as the second-largest Asian market in 2010, and will probably be larger than Japan's by 2015. Kulish and Cieply (2011) write about a multinational \$100 million financing for the 2012 *Cloud Atlas*. Cieply and Barnes (2013a, b) indicate how desire for access to the Chinese market has led to American producers willingly submitting to censorship and interference into creative elements by the politically controlled State Administration of Radio, Film and Television (SARFT) even while the films were being made. See also Pierson (2011), Cieply (2013b), and Burkitt (2013) about plans to create Hollywood's scale and influence on the world market in China. Shanghai's original independent studios had operated with relatively little political interference, but the studios were dissolved after the Japanese occupation of 1937.

26. The Heckscher–Ohlin theorem suggests that a country's factors of production, including labor, capital, and land/natural resources, rather than relative efficiencies of production, determine its comparative advantage.

27. Putnam (1997) discusses the trade issues, but from an anti-American point of view. Hoskins, McFadyen, and Finn (1997) discuss trade and the cultural discount extensively. They cite (p. 33) the Hoskins and Mirus (1988) definition of cultural discount attached to a given imported program or film as

(Value of domestic equivalent – value of import)/(value of domestic equivalent).

See also Jayakar and Waterman (2000), who concluded that a “home market effect” prevails in theatrical film trade, and Wildman and Siwek (1988), Moran (1996), and Oh (2001). The issue of cultural diversity and protection of home markets against U.S. audiovisual dominance – that is, a U.S. trade surplus with Europe estimated at \$8.1 billion in 2000 (half television and half film) – is covered in Riding (2003). Cowen (2002) discusses the reasons for Hollywood's dominance and contrasts the situation in several countries. Hirschberg (2004) and Scott (2004) respectively explore the meaning of American and foreign films. See also Acheson and Maule (2005) and Cowen (2007).

28. Kapner (2003) noted that the U.S. television industry's share of a growing international market had diminished, with 71% of the top ten programs in 60 countries being locally produced in 2001.

29. However, the former United Artists subsidiary of Transamerica, which did not engage in series production activities, reported operating income on sales to both theatrical and television markets.

30. See Abcarian and Horn (2006) and Horn (2006a).

31. Presales reduce industry profitability because projects financed in this way (about one of every six involves presales of foreign rights) increase the supply of films and heighten the demand for, and thus the cost of, various input factors (screenplays, actors, sound stages, etc.). Country-by-country sales of distribution rights are used by independent producers to secure bank loans to fund production. A presale structure is represented by Lions Gate's 2012 release of *Hunger Games*, an \$80 million production with at least \$45 million more in spending on marketing and advertising. Lions Gate invested \$30 million in the production, but offset the remaining \$50 million by preselling international distribution rights to other media companies.

32. Case histories from the mid-1980s include Cannon Group and DeLaurentiis Entertainment as examples of presales-strategy companies that ultimately ran into such fatal financing problems.

33. In pay cable, Time Warner's cable program wholesaler, Home Box Office (HBO), emerged in the 1970s as a powerful, almost monopsonistic (a market with one buyer

and many sellers) intermediary for Hollywood's products. In its position as dominant gatekeeper to the nation's wired homes, HBO was able to bargain effectively for retention of an important part of the revenue stream derived from the sale of pay-cable services (also see Chapter 8). By 1981, HBO had already surpassed the large theater chains to become Hollywood's single largest customer, licensing in excess of \$130 million in that year (and around \$500 million by the early 1990s). But it was not until the alternative The Movie Channel (TMC) and Showtime pay-cable services merged, and until videocassette recorder (VCR) penetration rates exceeded 20% of television households (in 1984), that HBO experienced significant competition. Prior to merging, Showtime was owned by Viacom and TMC was jointly owned by Warner Communications and American Express. Ownership of Showtime/TMC was split 50% Viacom, 40.5% Warner, and 9.5% American Express until 1985, when Viacom bought it all. In 1989, half of Showtime was then sold to Tele-Communications Inc.

The preceding history is that, around 1980, the major studios finally recognized that they had lost control of unit pricing and distribution in the important new medium of pay cable, and they accordingly attempted to reassert themselves by launching their own pay channel, called Premiere. The studio consortium participants, however, encountered great difficulty in arriving at consensus decisions – especially under threat of antitrust litigation aimed at preventing films from being shown exclusively on Premiere. Showtime was meanwhile able to formulate an exclusive five-year license agreement with Paramount. This \$500 million agreement, signed in 1983, has subsequently been followed by other exclusive arrangements between cable wholesalers and film producers. See also Mair (1988).

34. In Edward Jay Epstein's January 19, 2012 article in *The Wrap*, it is revealed that in 2010 Warner Bros. collected \$4 billion from worldwide licensing to TV, with nearly 80% coming from four cable buyers – NBC Universal networks, ABC Family, HBO, and Turner. This TV licensing harvest far exceeded the \$2.4 billion generated that year from theatrical box-office receipts, and was also far more profitable because, except for third-party residual payments, the costs of prints, advertising, and other distribution logistics for cable exhibition are minimal.

35. To see this, note that consumers' out-of-pocket costs per hour of entertainment generally range from approximately 50 cents to \$2, with pay-per-view events occasionally at \$3 or more. On average, a typical household might buy about 100 hours of such entertainment in a year.

Still, that same average household spends about 2,500 hours per year (almost seven hours per day) with free advertiser-supported television. Sponsors reach this audience at a cost of around 12 cents per hour per household (\$30 billion divided by 2,500 hours divided by 100 million households). All other things being equal (and they never are), entertainment industry revenues and profits would be enhanced greatly by selling more hours per household. However, this is easier said than done, in view of the time and income constraints discussed in Chapter 1.

As of 2014, U.S. consumers spent approximately \$130 billion on such direct purchases (\$12 billion in tickets, \$105 billion on cable and other video provider services, and \$13 billion for home video), whereas advertisers spent about \$70 billion to sponsor programming.

36. The motivation for this type of activity is most often based on a desire to achieve *economies of scope*, which Hoskins, McFadyen, and Finn (2004, p. 100) define as when "the total cost of producing two (or more) products within the same firm is less than producing them separately in two (or more) nonrelated firms." If products are produced jointly, one product may be a by-product of the other, and the factors of production are shared. Movies and television shows, for example, often share processes of production,

utilize many of the same windows of exhibition, are distributed through DVDs and cable networks, and generate by-products that may include merchandise. See also Brown (1984), Orwall and Peers (2002), and Peers (2005). Kessler (2011, pp. 195–7) argues that “control of the pipe” has been the key to the success of the media moguls of the late twentieth century. “Entertainment (or Editorial) and Perishable Information Leading Indirectly to a Transaction” (ED-LIT) is what media is all about.

37. Knee, Greenwald, and Seave (2009), for example, illustrate numerous examples of value-destroying acquisitions and data showing that for the 15 years ending 2005, the shares of the five major media conglomerates generated average annual returns of 8.2% versus 10.9% for the S&P 500 index. The same underperformance can be seen in data for 5 and 10 years.

38. Ready availability of older materials on the Internet has made them more competitive with newer programs. Also, advances in technology have made it easier to slow or prevent chemical and physical decay of important film masters. Many libraries literally faded in the vault as color dyes decompose over time. Although chronically inadequate funding of preservation efforts permits a part of the industry’s heritage to fade into oblivion every year, the costs of restoration or of colorization have declined along with the cost of computing power. As Linfield (1987) notes, colorization does not destroy the original black and white negatives or prints, which remain available for viewing by future generations. See also *Variety*, March 11, 1996, Cieply (2007a), who writes about the high cost of digital preservation, Siegal (2007), and a *Variety* (August 2, 2010) special issue on the subject.

39. The most important transfer of the early 1980s was MGM’s 1981 purchase of the United Artists subsidiary of Transamerica for \$380 million (including UA’s worldwide distribution organization and library of over 900 titles, many of Academy Award-winning best-picture stature). A subsequent (1985) transaction then again split MGM/UA Entertainment into separate pieces. The whole company, including MGM/UA’s distribution arm and a combined total of about 4,600 features, was sold to Turner Broadcasting for \$1.5 billion, which was only the first of numerous transactions of great complexity. Turner, later part of Time Warner, ended up owning MGM films made before 1986. In 1989, United Artists’ 1,000-feature library, distribution arm, and television business again came up for sale. But by 1992, the MGM remnants had been acquired by the French bank Credit Lyonnais after Giancarlo Parretti had defaulted on paying \$1.7 billion (including debt) for MGM. The French bank then sold MGM back to Kirk Kerkorian’s group in 1996 at a price of \$1.3 billion. See Marr and Peers (2004).

In 1981 and 1982, there were two other notable transfers involving more than just film libraries and distributing organizations. The 1981 takeover of Twentieth Century Fox for \$722 million included extensive real estate properties and several profitable divisions (a soft-drink-bottling franchise, an international theater chain, Aspen Ski Corporation, five television stations, and Deluxe Film Laboratories). Likewise, the 1982 purchase of Columbia Pictures (for about \$750 million) by the Coca-Cola Company included some broadcasting properties, part of the Burbank Studios real estate, and an arcade-game manufacturing subsidiary. And, in 2003, Lions Gate acquired the Artisan library of 7,000 films for approximately \$210 million.

Also of historical interest, Warner Bros. sold 850 features and 1,500 shorts to PRM, an investment firm, and Associated Artists Productions, a television distributor, in March 1956. In 1955, a company by the name of General Teleradio had bought RKO’s pre-1948 library for around \$18 million, which was followed by a Canadian stock promoter’s purchase of Warner’s pre-1948 library for about \$21 million. Through its purchase of Associated Artists Productions in late 1957, United Artists, for about \$30 million, then gained control of some

700 pre-1948 Warner films and several hundred other features, short subjects, and cartoons. In addition, as Stanley (1978, p. 152) and Bruck (2003, pp. 173–5) describe, in 1958 MCA paid approximately \$50 million (\$10 million cash) to acquire Paramount's pre-1948 library of 750 features. Halbfinger (2008a) writes of the need to refresh a library such as MGM's with new productions. See also Amram (2003).

40. Significant changes in studio real estate included the early 1970s combination of the Columbia Pictures and Warner Bros. lots (at a time when Columbia was in great financial distress) and MGM's decision in 1973 to reduce production and thus to sell 130 out of 175 acres in Culver City. Eighteen acres of the Columbia studio were sold in 1977 for \$6.1 million, whereas MGM's early 1970s sale of the Culver City assets brought \$12 million. The former MGM Culver City property was subsequently bought by Lorimar, which was soon thereafter merged into Warner Communications (now Time Warner). In 1989, Columbia (Sony) then swapped its Burbank holdings for the Culver City property held by Warner. Lorimar's 1987 purchase from Turner Broadcasting of the remaining Culver City property was for over \$50 million, but it is impossible to attribute an exact price because other assets were included in the transaction. See also Cieply (2013a).

41. Demand for production space had become so strong that other parts of the country were able to compete effectively against Hollywood with so-called runaway studios by promising more accommodating shooting schedules or lower overall costs. See Harris (1981) and Bagamery (1984). Benefiting from lower costs, fewer union restrictions, and a weak currency versus the U.S. dollar, Canada had by the early 2000s taken a significant share of Hollywood's filmed entertainment production work. But this began to change when Canadian tax shelters, as McNary (2003) notes, were removed. As of 2002, Canada and Australia respectively attracted projects with film-production tax credits equal to 11% and 12.5% of labor costs. More recently, Hungary has also been more active in providing production incentives, which are discussed in Bilefsky (2010). See DiOrio and McNary (2002) and Boucher (2005) on filming of *Superman Returns* in Australia, and Rousek (2010).

By 2008, with the U.S. dollar much weaker, foreign filming had become relatively unattractive, and many states, as described in Sanders (2008b), began to woo productions with new tax credits. In New York, for instance, producers can receive back via such credits up to 30% of their expenses, and 35% of expenses in New York City. But an important offset to any such tax credits and rebates is that companies then need to spend more on overhead and staffing costs. See also McNary (2008) and Rivkin (2008). Schuker (2009a) discusses how local incentives affect creative decisions.

A study of Michigan's film industry credits, commissioned by the Michigan Education Association and conducted by the Anderson Economic Group, concluded that "most of the jobs are temporary" and that the program "leaves little to show for the investment." Michigan's program costs more than \$150 million and refunds 40% to 42% of a company's qualified expenditures. See especially Story (2012) about failure of subsidies, "Study: Michigan Tax Breaks Not Very Effective," *New York Times*, March 4, 2010, and Cieply (2008a, 2010a, 2011b), in which the conclusions are similar. Chozick (2010b), Kaufman (2010), and Felton (2011) are also relevant, as is "Strapped States Are No Longer Fans of Hollywood" in *Bloomberg BusinessWeek*, November 29, 2010, and "Filmmakers Shoot for Breaks," *Wall Street Journal*, June 5, 2012. Dawn (2012) suggests that the Massachusetts tax credit of 25% begun in 2006 has been economically beneficial. But the 2012 study by the Center on Budget and Policy Priorities cited in Reynolds (2013) found that total state subsidies amounted to \$1.5 billion and could have paid salaries for more than 20,000 each of schoolteachers, policemen, and firefighters and could have resulted in lower taxes on small

businesses, which create many more jobs than filming (in which many jobs are temporary anyway and filled by out-of-state workers who fly to the location). See also Longwell (2012), and Bauerlein (2013), which tells of how North Carolina has reduced film tax credits and decided the funds saved would be better used for other purposes. Schwartzel (2014) relays how much production California has lost to other states with more generous tax credits. Finley (2014) shows how tax credits are a costly way to create (impermanent) additional jobs.

42. This follows veteran film critic Todd McCarthy, who wrote in *The Hollywood Reporter* (August 3, 2012): “Virtually every art form presents an opportunity for escapism. Films, because they can be so all-enveloping, transporting us to other worlds, seducing us with beautiful images and music and enticing us with beautiful people, have it all over the other arts in this regard.”

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