1
Economic Perspectives

To everything there is a season, and a time to every purpose under the heaven. – Ecclesiastes

Extending this famous verse, we can also say that there is a time for work and a time for play. There is a time for leisure.

An important distinction, however, needs to be made between the precise concept of a time for leisure and the semantically different and much fuzzier notion of *leisure time*, the initial topic. In the course of exploring this subject, the fundamental economic forces that affect and motivate spending on all forms of entertainment goods and services will be revealed. The perspectives provided by this approach will enable us to see how entertainment is defined and how it fits into the larger economic picture.

1.1 Time Concepts

Leisure and Work

Philosophers and sociologists have long wrestled with the problem of defining *leisure* – the English word derived from the Latin *licere*, which means "to be permitted" or "to be free." Leisure has, in fact, usually been

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described in terms of its sociological and psychological (state-of-mind) characteristics.[1] And closely tied into this is the more recent notion that "play" is a fundamental aspect of life.[2]

The classical attitude was epitomized in the work of Aristotle, for whom the term *leisure* implied both availability of time and absence of the necessity of being occupied. According to Aristotle, that very absence is what leads to a life of contemplation and true happiness – yet only for an elite few, who do not have to provide for their own daily needs. Veblen (1899) similarly saw leisure as a symbol of social class (and status emulation as a driver of demand). To him, however, it was associated not with a life of contemplation but with the "idle rich," who identified themselves through its possession and its use.

Leisure has more recently been conceptualized either as a form of activity engaged in by people in their free time or, preferably, as time free from any sense of obligation or compulsion.[3] The term *leisure* is now broadly used to characterize time not spent at work (where there is an obligation to perform).[4] Naturally, in so defining leisure by what it is not, metaphysical issues remain largely unresolved. There is a question of how to categorize work-related time such as that consumed in preparation for, and in transit to and from, the workplace. And sometimes the distinctions between one person's vocation and another's avocation are difficult to draw: People have been known to "work" pretty hard at their hobbies.

Although such problems of definition appear quite often, they fortunately do not affect analysis of the underlying economic structures and issues.

Recreation and Entertainment

In stark contrast to the impressions of Aristotle or Veblen, today we rarely, if ever, think of leisure as contemplation or as something to be enjoyed only by the privileged. Instead, "free" time is used for doing things and going places, and the emphasis on activity corresponds more closely to the notion of recreation – refreshment of strength or spirit after toil – than to the views of the classicists.

The availability of time is, of course, a precondition for recreation, which can be taken literally as meaning re-creation of body and soul. But because active re-creation can be achieved in many different ways – by playing tennis or by going fishing, for example – it encompasses aspects of both physical and mental well-being. Hence, recreation may or may not contain significant elements of amusement and diversion or occupy the attention agreeably. For instance, amateurs training to run a marathon might arguably be involved in a form of recreation. But if so, the entertainment aspect would be rather minimal.

As noted in the Preface, however, entertainment is defined as that which produces a pleasurable and satisfying experience. The concept of entertainment is thus subordinate to that of recreation: It is more specifically defined through its direct and primarily psychological and emotional effects.

Time

Most people have some hours left over – "free time," so to speak – after subtracting the hours and minutes needed for subsistence (mainly eating and sleeping), for work, and for related activities. But this remaining time has a cost in terms of alternative opportunities forgone.

Because time is needed to use or to consume goods and services, as well as to produce them, economists have attempted to develop theories that treat it as a commodity with varying qualitative and quantitative cost features. However, as Sharp (1981) notes in his comprehensive book, economists have been only partially successful in this attempt:

> Although time is commonly described as a scarce resource in economic literature, it is still often treated rather differently from the more familiar inputs of labor and materials and outputs of goods and services. The problems of its allocation have not yet been fully or consistently integrated into economic analysis. (p. 210)

Investigations into the economics of time, including those of Becker (1965) and DeSerpa (1971), have suggested that the demand for leisure is affected in a complicated way by the consumption-cost of time. For instance, according to Becker (1965; see also Ghez and Becker 1975):

> The two determinants of the importance of forgone earnings are the amount of time used per dollar of goods and the cost per unit of time. Reading a book, getting a haircut, or commuting use more time per dollar of goods than eating dinner, frequenting a nightclub, or sending children to private summer camps. Other things being equal, forgone earnings would be more important for the former set of commodities than the latter.
>
> The importance of forgone earnings would be determined solely by time intensity only if the cost of time were the same for all commodities. Presumably, however, it varies considerably among commodities and at different periods. For example, the cost of time is often less on weekends and in the evenings. (Becker 1965, p. 503)

From this it can be seen that the cost of time and the consumption-time intensity of goods and services – e.g., commitment, is usually higher for reading a book than for reading a newspaper – are significant factors in selecting from among entertainment alternatives. "Time is what remains scarce when all else becomes abundant."[5] Time indeed is money.

Expansion of Leisure Time

Most of us are not commonly subject to sharp changes in our availability of leisure time (except on retirement or loss of job). Nevertheless, there is a fairly widespread impression that leisure time has been trending steadily higher ever since the Industrial Revolution of more than a century ago. Yet the evidence on this is mixed. Figure 1.1 shows that in the United States the largest increases in leisure time – workweek reductions – for agricultural and nonagricultural industries were achieved prior to 1940 and had already been reflected in rising interest in entertainment as early as the 1920s.[6]
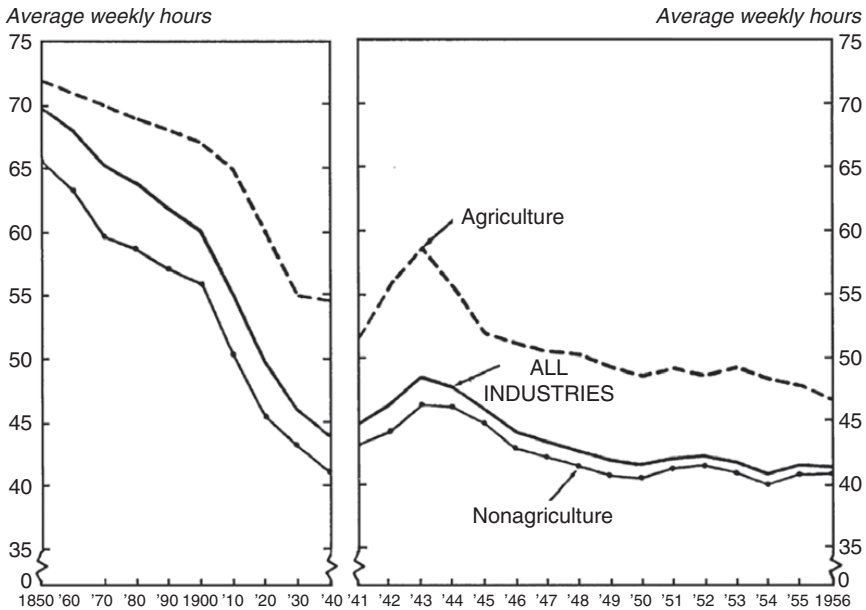
Figure 1.1. Estimated average weekly hours for all persons employed in agricultural and nonagricultural industries, 1850–1940 (ten-year intervals) and 1941–56 (annual averages for all employed persons, including the self-employed and unpaid family workers).
Source: Zeisel (1958).

But more recently, the lengths of average workweeks, adjusted for increases in holidays and vacations have scarcely changed for the manufacturing sector and have also stopped declining in the services sector (Table 1.1 and Figure 1.2). By comparison, average hours worked in other major countries, as illustrated in Figure 1.3, have declined markedly since 1970.

Although this suggests that there has been little, if any, expansion of leisure time in the United States, what has apparently happened instead is that work schedules now provide greater diversity. As noted by Smith (1986), "A larger percentage of people worked under 35 hours or over 49 hours a week in 1985 than in 1973, yet the mean and median hours (38.4 and 40.4, respectively, in 1985) remained virtually unchanged."[7]

If findings from public-opinion surveys on Americans and the arts are to be believed, the number of hours available for leisure may actually at best be holding steady.[8] But occasionally the view that Americans are actually working more hours than previously has been expressed.[9]

Table 1.1. *Average weekly hours at work, 1948–2018,[a] and median weekly hours at work for selected years*

| Year | Average hours at work | | Median hours at work | |
	Unadjusted	Adjusted[b]	Year	Hours
1948	42.7	41.6	1975	43.1
1956	43.0	41.8	1980	46.9
1962	43.1	41.7	1987	46.8
1969	43.5	42.0	1995	50.6
1975	42.2	40.9	2004	50.0
1986	42.8		2018	43.5

[a] Nonstudent men in nonagricultural industries.
[b] Adjusted for growth in vacations and holidays.
Sources: Owen (1976, 1988), and Harris (1995), https://theharrispoll.com for median hours at work and preliminary estimate for 2018.
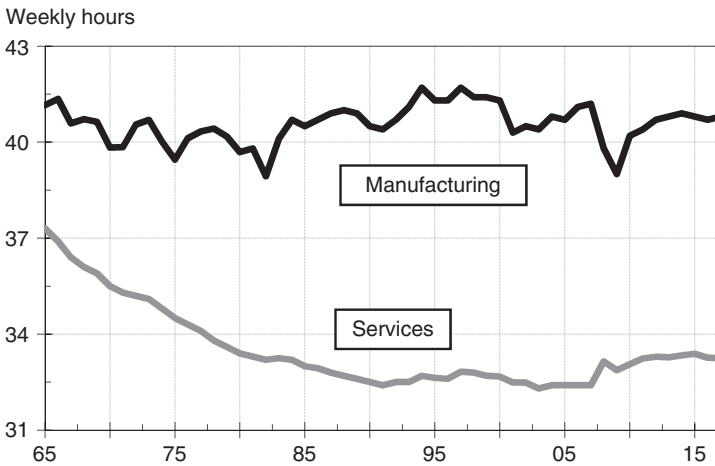

Figure 1.2. Average weekly hours worked in manufacturing and service industries 1965–2018.
Source: U.S. Department of Commerce.

Aguiar and Hurst (2007) argue the opposite. And as shown in Table 1.2, McGrattan and Rogerson (2004) found that since World War II, the number of weekly hours of market work in the United States has remained roughly constant, even though there have been dramatic shifts in various subgroups.

Robinson (1989, p. 34) also measured free time by age categories and found that "most gains in free time have occurred between 1965 and 1975 [but] since then, the amount of free time people have has remained fairly stable." By adjusting for age categories, the case for an increase in total leisure hours available becomes much more persuasive.[10]

Table 1.2. *Aggregate weekly hours worked per person (+ 15), 1950–2000*

Year	Aver. weekly hours worked		Employment-to-population ratio (%)
	Per person	Per worker	
1950	22.34	42.40	52.69
1960	21.55	40.24	53.55
1970	21.15	38.83	54.47
1980	22.07	39.01	56.59
1990	23.86	39.74	60.04
2000	23.94	40.46	59.17
% change: 1950–2000	7.18	−4.56	12.30

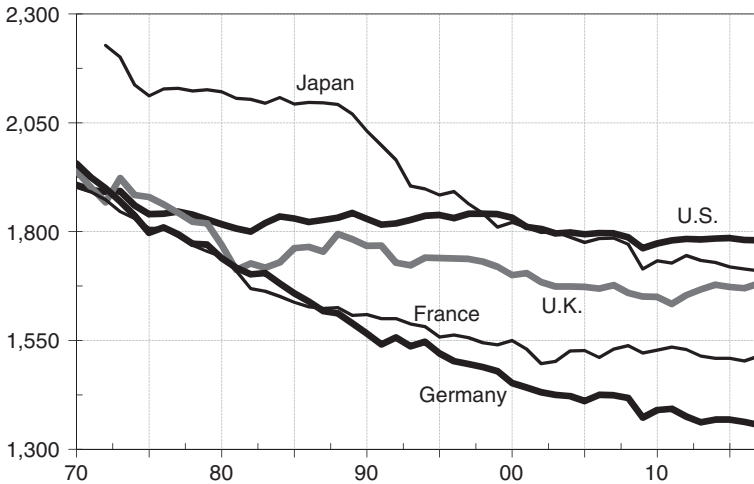*Source:* McGrattan and Rogerson (2004), based on U.S. Dept. of Commerce, Bureau of the Census.

Figure 1.3. Average annual hours worked by persons employed (U.K. series changed after 2010), 1970–2018.
Source: OECD Employment Outlook.

In addition, Roberts and Rupert (1995) found that total hours of annual work have not changed by much but that the *composition* of labor has shifted from home work to market work, with nearly all the difference attributable to changes in the total hours worked by women. A similar conclusion as to average annual hours worked was also reported by Rones, Ilg, and Gardner (1997).[11] Yet, according to Jacobs and Gerson (1998, p. 457), "even though the average work week has not changed dramatically in the U.S. over the last several decades, a growing group of Americans are clearly and strongly

pressed for time." And this fully reflects the *income-time paradox* wherein the young and elderly have lots of time but relatively little income available as compared to the middle-aged, who have income but no time.

In all, it seems safe to say that for most middle-aged and middle-income Americans – and recently for Europeans too – leisure time is probably not expanding noticeably.[12] The comprehensive compilation of research by Ramey and Francis (2009) indeed suggests that "per capita leisure and average annual lifetime leisure increased by only four or five hours per week during the last 100 years … leisure has increased by 10 percent since 1900."

Still, whatever the actual rate of expansion or contraction may be, there has been a natural evolution toward repackaging the time set aside for leisure into longer holiday weekends and extra vacation days rather than in reducing the minutes worked each and every week.[13]

Particularly for those in the higher-income categories – conspicuous consumers, as Veblen would say – the result is that personal-consumption expenditures (PCEs) for leisure activities are likely to be intense, frenzied, and compressed instead of evenly metered throughout the year. Moreover, with some adjustment for cultural differences, the same pattern is likely to be seen wherever large middle-class populations emerge.

Estimated apportionment of leisure hours among various activities in 2018 are indicated in Table 1.3.[14] The contrast to apportionment in 2005 is stark, even though that was not so very long ago. For instance, total television in that year accounted for 50.1% of leisure hours spent, total radio was 30.5%, newspapers were 3.9%, and magazines 6.5%. Of course, since then online services have grown at the expense of these older media.

Table 1.4 shows how Americans on average allocate leisure time of around five hours a day.

1.2 Supply and Demand Factors

Productivity

Ultimately, more leisure time availability is not a function of government decrees, labor union activism, or factory owner altruism. It is a function of the rising trend in output per person-hour – in brief, the rising productivity of the economy. Quite simply, technological advances embodied in new capital equipment, in the training of a more skilled labor pool, and in the development of economies of scale allow more goods and services to be produced in less time or by fewer workers. Long-term growth in leisure-related industries thus depends on the rate of technological innovation throughout the economy.

Information concerning trends in productivity and other aspects of economic activity is provided by the National Income and Product Accounting (NIPA) data from the U.S. Bureau of Labor Statistics. From

Table 1.3. *Estimated hours per adult per year using media, 2018*

Medium	Hours per person year	% of total time
Television[1]	**1,380**	**31.7**
Network affiliates	452	10.4
Independent stations	3	0.1
Basic cable programs	868	19.9
Pay-cable programs	57	1.3
Radio[2]	**685**	**15.7**
Home	205	4.7
Out of home	480	11.0
Internet[3]	1,758	40.4
Newspapers[4]	64	1.5
Recorded music[5]	159	3.7
Magazines[6]	52	1.2
Leisure books[7]	71	1.6
Movies: theaters	9	0.2
Home video[8]	17	0.4
Spectator sports	17	0.4
Video games: home	134	3.1
Cultural events	6	0.1
Total	**4,352**	**100.0**
Hours per adult per week	83.7	
Hours per adult per day	11.9	

[1] Does not include over-the-top viewing, part of the Internet category.
[2] Includes satellite radio but not online listening, which is captured in the Internet category.
[3] Includes mobile access.
[4] Includes free dailies but not online reading, part of the Internet category.
[5] Includes licensed digital music.
[6] Does not include online reading, part of the Internet category.
[7] Includes electronic and audio books.
[8] Does not include OTT viewing, part of the Internet category.
Source: Wilkofsky Gruen Associates.

Table 1.4. *Leisure time on an average day, 2018[a]*

	Minutes	% of total
Watching TV	167	55.8
Socializing and communicating	41	13.7
Playing computer games	25	8.4
Reading	19	6.4
Sports, exercise, recreation	18	6.0
Relaxing and thinking	17	5.7
Other leisure activities	12	4.0
Total	299	100.0

[a] Includes all persons age 15+ and all days of the week.
Source data: U.S. Bureau of Labor Statistics, www.bls.gov/tus/
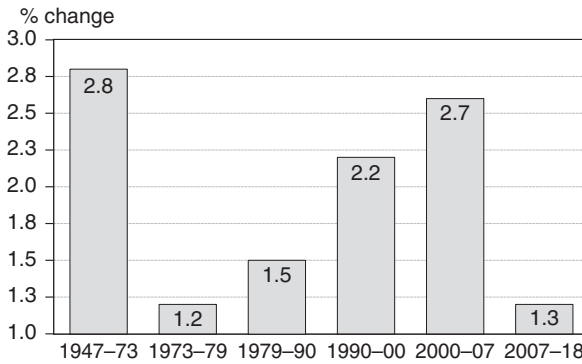charts/leisure.htm

% change

Figure 1.4. Average annual percent change in nonfarm business productivity in the United States, 1947–2018, selected periods.
Source: U.S. Department of Labor and St. Louis Federal Reserve Bank FRED, available at: stlouisfed.org.

these sources it can be seen (Figure 1.4) that overall productivity between 1979 and 1990 rose at an average annual rate of approximately 1.5%, then jumped to a rate of 2.7% between 2000 and 2007 before falling back to a rate of 1.3% between 2007 and 2018.

This suggests that the *potential* for leisure-time and travel-related activity expansion rose steadily in the last quarter of the twentieth century and into the early 2000s. Meanwhile, the gap between European and U.S. labor productivity narrowed into the early 1990s.[15] Since then, productivity increases in the U.S. and other already developed countries have diminished but are still rising from a relatively low base in emerging markets (EMs). The potential for growth of leisure-time and spending on entertainment, media, and travel is thus relatively much higher in EM countries.

Demand for Leisure

All of us can choose either to fully use free time for recreational purposes (defined here and in NIPA data as being inclusive of entertainment activities) or to use some of this time to generate additional income. How we allocate time between the conflicting desires for more leisure or more income then becomes a subject that economists investigate with standard analytical tools. In effect, economists can treat demand for leisure as if it were, say, demand for gold, for wheat, or for housing. And they often estimate and depict the schedules of supply and demand with curves of the type shown in Figure 1.5.

In simplified form it can be seen that, as the price of a unit rises, the supply of it will normally increase and the demand for it will decrease so that over time and in an openly competitive market an approximate equilibrium at the intersection of the curves will be reached (though in reality, such equilibrium
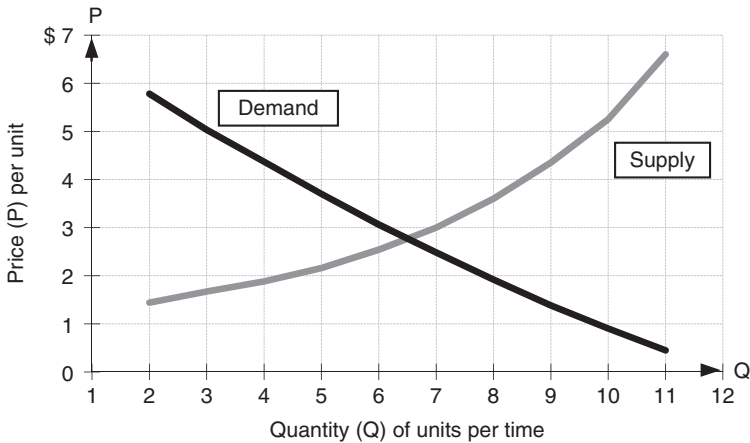
Figure 1.5. Supply and demand schedules.

is fictional). This is the narrative that primarily applies to tangible manufactured assets and agricultural produce.[16]

As such, however, it doesn't necessarily apply to software and other types of intellectual properties (IPs) that include movies, music recordings, books, and services of all types. Production of the first item might cost upwards of $100 million, but then for each additional unit the cost at the margin is close to zero and the profit margin per unit is high.[17]

Consumers typically tend to substitute less expensive close-equivalent goods and services for more expensive ones and the total amounts they can spend – their budgets – are limited or constrained by income. Owen (1970) extensively studied the effects of such substitutions and changes in income as related to demand for leisure and observed:

An increase in property income will, if we assume leisure is a superior good, reduce hours of work. A higher wage rate also brings higher income which, in itself, may incline the individual to increase his leisure. But at the same time the higher wage rate makes leisure time more expensive in terms of forgone goods and services, so that the individual may decide instead to purchase less leisure. The net effect will depend then on the relative strengths of the income and price elasticities . . . It would seem that for the average worker the income effect of a rise in the wage rate is in fact stronger than the substitution effect. (p. 18)

In other words, as wage rates continue to rise up to point A in Figure 1.6, people will choose to work more hours to increase their income (income effect). But they eventually will begin to favor more leisure over more income (substitution effect, between points A and B), resulting in a backward-bending labor-supply curve.[18] And the net (of taxes) hourly wage thus becomes the opportunity cost of an hour of leisure!
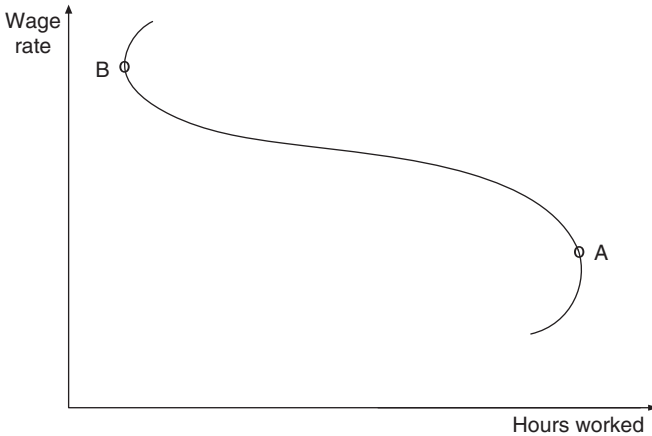
Figure 1.6. Backward-bending labor-supply curve.

Although renowned economists, including Adam Smith, Alfred Marshall, Frank Knight, A. C. Pigou, and Lionel Robbins, have substantially differed in their assessments of the net effect of wage-rate changes on the demand for leisure, it is clear that "leisure does have a price, and changes in its price will affect the demand for it" (Owen 1970, p. 19). Results from a Bureau of Labor Statistics survey of some 60,000 households in 1986 indeed suggest that about two-thirds of those surveyed do not want to work fewer hours if it means earning less money.[19]

As Owen (1970) has demonstrated, estimation of the demand for leisure requires consideration of many complex issues, including the nature of "working conditions," the effects of increasing worker fatigue on production rates as work hours lengthen, the greater availability of educational opportunities that affect the desirability of certain kinds of work, government taxation and spending policies, and market unemployment rates.[20]

Expected Utility Comparisons

Individuals differ in terms of emotional gratification derived from consumption of different goods and services. It is thus difficult to measure and compare the degrees of satisfaction derived from, say, eating dinner as opposed to buying a new car. To facilitate comparability, economists have adapted an old philosophical but vague concept known as utility (which is essentially pleasure).[21] Utility "is not a measure of usefulness or need but a measure of the desirability of a commodity from the psychological viewpoint of the consumer."[22] It is often the consumption characteristics and qualities associated with goods rather than the possession of goods themselves that matters most.[23]

Rational individuals try to maximize utility – in other words, make decisions that provide them with the most satisfaction. But they are hampered in this regard because decisions are normally made under conditions of uncertainty, with incomplete information, and therefore with the risk of an undesired outcome. People thus tend implicitly to include a probabilistic component in their decision-making processes – and they end up maximizing expected utility rather than utility itself.

The notion of expected utility is especially well applied to thinking about demand for entertainment goods and services and the "experiences" provided. It explains, for example, why people may be attracted to gambling or why they are sometimes willing to pay scalpers enormous premiums for theater or sports tickets. Its application also sheds light on how various entertainment activities compete for the limited time and funds of consumers.

To illustrate, assume for a moment that the cost of an activity per unit of time is somewhat representative of its expected utility. If the admission price of a two-hour movie is $12, and if the purchase of video-game software for $25 provides six hours of play before the onset of boredom, then the cost per minute for the movie is 10 cents whereas that for the game is 6.9 cents. Now, obviously, no one decides to see a movie or buy a game on the basis of explicit comparisons of cost per minute. For an individual many qualitative (nonmonetary) factors, especially fashions and fads, may affect the perception of an item's expected utility. However, in the aggregate and over time, such implicit comparisons do have a significant cumulative influence on relative demand for entertainment (and other) products and services.

Demographics and Debts

Over the longer term, the demand for leisure goods and services can also be significantly affected by changes in the relative growth of different age cohorts. Teenagers tend to be important purchasers of recorded music; people under the age of 30 are the most avid moviegoers. Accordingly, a large increase in births after World War II created, in the 1960s and 1970s, a market highly receptive to movie and music products. As this postwar generation matures past its years of family formation and into years of peak earnings power and then retirement, spending may be naturally expected to shift collectively to areas such as casinos, cultural events, and tourism and travel and away from areas that are usually of the greatest interest to people in their teens or early twenties.

The expansive demographic shifts most important to entertainment industry prospects in the United States include (1) a projected increase in the number of 5- to 17-year-olds by 4.7 million from 2010 to 2020 and another 4.8 million from 2020 to 2030, and (2) a major expansion of the population over age 65 (Table 1.5). By 2030, the 65+ group will account for an estimated 19.3% of the population, as compared to 12.4% in 2000.

Table 1.5. *U.S. population by age bracket, components of change, and trends by life stage, 1970–2030*

Components of population change forecasts

	Percentage distribution				Change (millions)		
Age	2000	2010	2020	2030	2000–2010	2010–2020	2020–2030
Under 5	6.8	6.8	6.7	6.5	1.9	1.7	1.3
5–17	18.8	17.4	17.2	17.0	1.0	4.7	4.8
18–34	23.8	23.4	22.5	21.7	5.4	4.3	4.2
35–65	38.1	39.4	37.5	35.5	14.7	5.8	4.5
65+	12.4	13.0	16.1	19.3	5.1	14.6	17.3
Total[a]	100.0	100.0	100.0	100.0	28.1	31.1	32.1

Population trends by life stage (millions)

Life stage	2000	2010	2020	2030
0–13	56.2	58.2	63.6	68.0
14–24	43.4	47.7	48.9	53.9
25–34	39.8	41.8	46.1	47.0
35–44	45.1	41.3	43.7	48.2
45–54	38.0	44.7	41.4	44.0
55–64	24.4	36.3	43.0	40.3
65+	35.1	40.2	54.8	72.1
Total[a]	282.0	310.2	341.5	373.5

[a] Totals might not be exact due to rounding.
Source: www.census.gov.

A significant change from the years between 2010 and 2020 to the decade of 2020 to 2030 is that the number of people in the 45–64 group will not be increasing in proportion to the number of people in the 25–44 group. This is of particular importance given that those in the younger category spend much of their income when they enter the labor force and form households, whereas those in the older category are already established and thus more likely to be in a savings mode, perhaps to finance college educations for their children or to prepare for retirement, when earnings are lower. The ratio of people in the younger group to those in the older group – in effect, the spenders versus the savers – is illustrated in Figure 1.7.

Although it depends on the specific industry component to be analyzed, proper interpretation of long-term changes in population characteristics may also require that consideration be given to several additional factors, which include dependency ratios, fertility rates, number of first births, number of families with two earners, and trends in labor force participation rates for women, which had climbed steadily from 45% in 1975 to around 60% by 2005.[24] Elements of consumer debt (see Figure 14.3), weighted by the
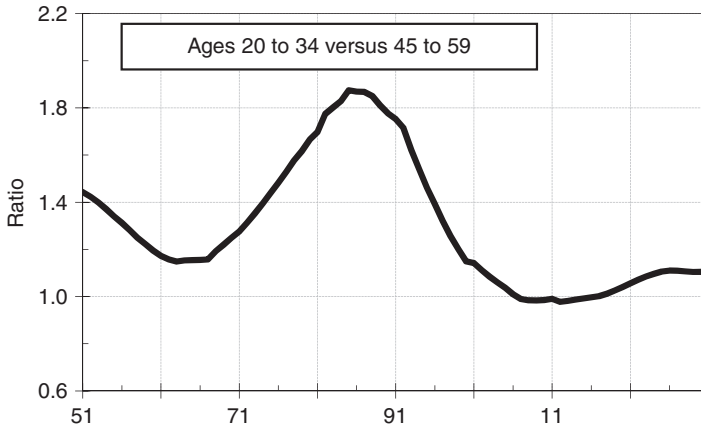
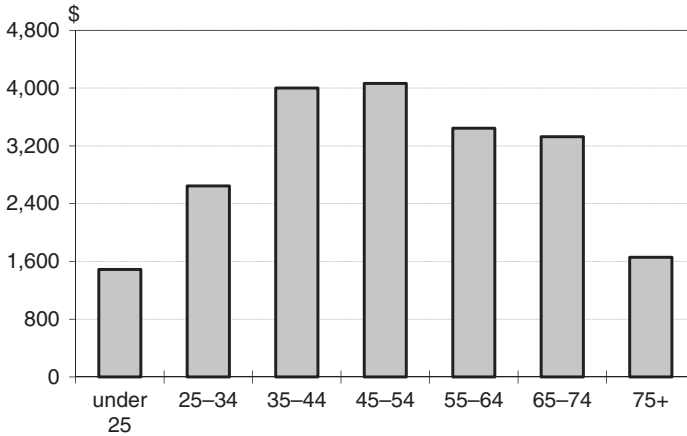Figure 1.7. Ratio of spenders to savers, 1950–2030.

Figure 1.8. Average annual expenditures on entertainment per person by age category, 2017. *Source:* U.S. Department of Commerce survey.

aforementioned demographic factors, probably explain why, according to the Louis Harris surveys previously cited (Table 1.1), leisure hours per week might vary so much. Still, a rising median age (as in the U.S. and other developed countries) will generally tend to abate pressures on time availability.

As can be seen from Figure 1.8, aggregate spending on entertainment is concentrated in the middle-age groups, which are the ages when income usually peaks, even though free time may be relatively scarce. This is known
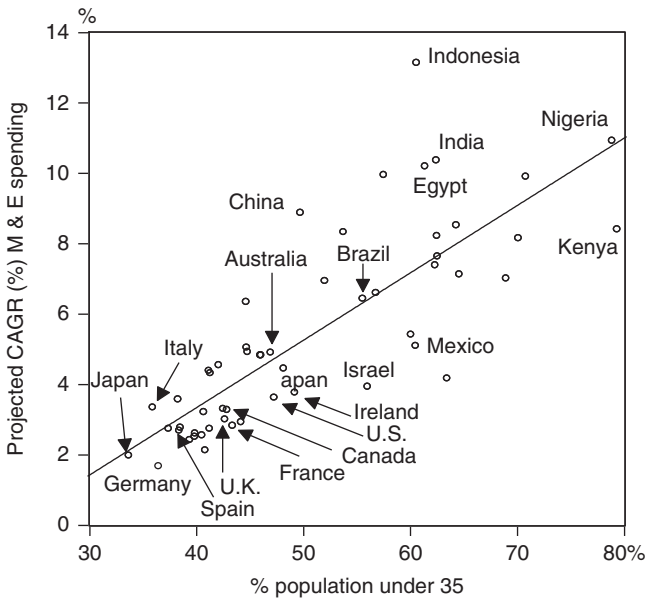
Figure 1.9. Youngsters drive spending. Percentage of population under age of 35 versus projected compound annual growth rate, 2015–2020, of spending on media and entertainment, selected countries.
Data courtesy of PwC, *PwC Global Entertainment and Media Outlook: 2016–2020*, pwc
.com/outlook.

as the leisure paradox, wherein young people usually have more time and less income than the middle-aged, who are in the prime of their career and family-raising years and have the income but not the time.

The most important underlying conditions for media and entertainment sector growth will everywhere (i.e., globally) always include an increase in the number of middle class-income consumers, a large percentage of population under the age of 35, and a non-authoritarian political environment and culture that allows for freedom of expression and accepts diversity of ideas. Figure 1.9 is representative of the importance of a young population as an influence on media and entertainment spending growth.

Barriers to Entry

The supply of entertainment products and services offered would also depend on how readily prospective new businesses can overcome barriers to entry (i.e., competitive advantages) and thereby contest the market. Barriers to entry – which can be structural (economies of scale), strategic (price reductions), or institutional (tariffs and licenses) – restrict supply and

fit mainly into the following categories, listed in order of importance to the entertainment industries:

Capital
Know-how
Regulations[25]
Price competition.

To compete effectively, large corporations must of necessity invest considerable time and capital to acquire technical knowledge and experience. But the same goes for individual artists seeking to develop commercially desirable products in the form of plays, books, films, or songs. Government regulations such as those applying to the broadcasting, cable, and casino businesses often present additional hurdles for potential new entrants to surmount. Furthermore, in most industries, established firms ordinarily have some ability to protect their positions through price competition.

1.3 Primary Principles

Marginal Matters

Microeconomics provides a descriptive framework in which to analyze the effects of incremental changes in the quantities of goods and services supplied or demanded over time. A standard diagram of this type, displayed in Figure 1.10, shows an idealized version of a firm that maximizes its profits by pricing its products at the point where marginal revenue (MR) – the extra revenue gained by selling an additional unit – equals marginal cost (MC), the cost of supplying an extra unit. Here, the average cost (AC), which includes both fixed and variable components, first declines and is then pulled up by rising marginal cost. Profit for the firm is represented by the shaded rectangle (price [p] times quantity [q] minus cost [c] times quantity [q]).

Given that popular entertainment products feature one-of-a-kind talent (e.g., Elvis or Sinatra recordings) or brand-name products and services (e.g., Apple or Disney), the so-called competitive-monopolistic model of Figure 1.10a, in which many firms produce slightly differentiated products, is not far-fetched. The objectives for such profit-maximizing firms are to both rightward-shift and also steepen the demand schedule idealized by line D. A shift to the right represents an increase in demand at each given price.

Meanwhile, a schedule of demand that perhaps through promotional and marketing becomes more vertical (i.e., quantity demanded becomes less responsive to a change in price and becomes more price-inelastic) – enables a firm to reap a potentially large proportionate increase in profits as long as marginal costs are held relatively flat (Figure 1.10b). In all, the more substitutes that are available, the greater is the price elasticity of demand.
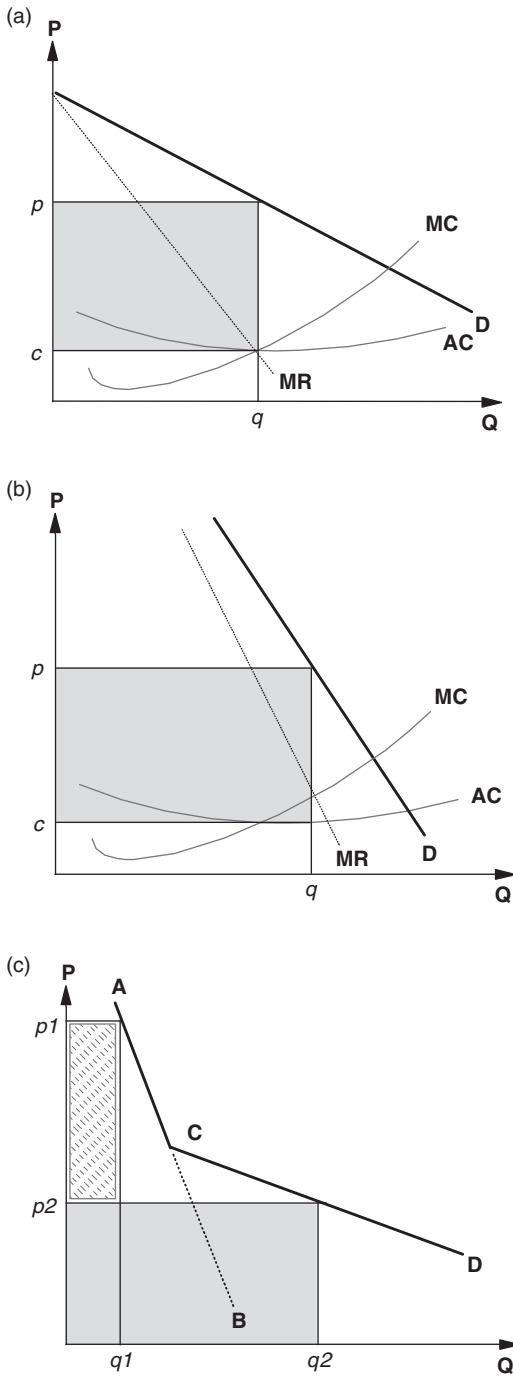
Figure 1.10. (a) Marginal costs and revenues, normal setting, (b) Demand becomes more inelastic and right-shifted, and (c) Consumers' surplus under price discrimination.

Look, for example, at what happens when a movie is made. The initial capital investment in production and marketing is risked without knowing how many units (including theater tickets, video sales and rentals, and television viewings) will ultimately be demanded. The possibilities range from practically zero to practically infinite.

Whatever the ultimate demand turns out to be, however, the costs of production and marketing, which are large compared with other, later costs, are mostly borne upfront. Come what may, the costs here are sunk (i.e., the money is already spent and is likely unrecoverable), whereas in many other manufacturing processes, the costs of raw materials and labor embedded in each unit produced (variable and marginal) may be relatively high and continuous over time.

In entertainment, the cost of producing an incremental unit (e.g., an extra movie print, DVD, or download) is normally miniscule as compared with the sunk costs, which should by this stage be irrelevant for the purpose of making ongoing strategic decisions. It may thus, accordingly, be sensible for a distributor to take a chance on spending a little more on marketing and promotion in an attempt to shift the demand schedule into a more price-inelastic and rightward position. Such inelastic demand is characteristic of products and services that

are considered to be necessities
have few substitutes
are a small part of the budget
are consumed over a relatively brief time, or are not used often.

Economists use estimates of elasticity (i.e., responsiveness) to indicate the expected percentage change in demand if there is a 1% change – up or down – in price or income (or some other factor). In the case of price, this can be stated as

$$\varepsilon_p = \frac{\% \text{ change in quantity demanded}}{\% \text{ change in unit price}}$$

All other things being equal, quantity demanded would normally be expected to rise with increases in income and decline with increases in price.[26] For example, if quantity demanded declined 8% when price rose 4%, the price elasticity of demand would be −2.0. In theory, cross-elasticities of demand between goods and services that are close substitutes (a new *Star Trek* film versus a new *Star Wars* film), or complements to each other (movie admissions and sales of popcorn), might also be estimated. Such notions of elasticity suggest that it makes sense for firms to first increase the price markup on goods with the most inelastic demand (known as the Ramsey, or inverse elasticity pricing, rule).

In sum, when elasticity is greater than 1, price increases lead to decreases in revenue and vice versa. When elasticity is less than 1 (inelastic), increases

in price lead to increases in revenues. And when elasticity equals 1, changes in price lead to no changes in revenues.

Elasticity: When prices are raised, revenues are . . .

>1	Lower
<1	Higher
=1	No change

Similarly, elasticity with respect to income can be estimated for goods and services classifiable as luxuries, necessities, or inferiors.[27] With luxuries, quantity demanded grows faster as income rises, and the income elasticity is greater than 1.0. For necessities, quantity demanded increases as income rises, but more slowly than income (elasticity 0.0 to 1.0). And for inferior goods, income elasticity is negative, with quantity demanded falling as income rises. By these measures, most entertainment products and services are either necessities or luxuries for most people most of the time (but with classification subject to change over the course of an economic or individual's life-stage cycle).

That demand grows more slowly than income for needs (e.g., food, shelter, clothing) and more quickly for wants (e.g., entertainment, travel, recreation experiences) has been seen in most societies and nations. Figure 1.11 is based on per capita data from 116 countries and compares income elasticity estimates for a need category such as clothing to those for a want category such as recreation. From this it can be seen in the upper panel that needs demand grows at about the same pace as income, but that wants demand tends to rise at a higher rate than income: As countries become wealthier, people tend to spend proportionately more of their income on wants rather than needs.[28]

Price Discrimination

If, moreover, a market for, say, airline or theater seats (see Chapter 13) can be segmented into first and economy classes, profits can be further enhanced by capturing what is known in economics as the consumers' surplus – the price difference between what consumers actually pay and what they would be willing to pay. Such a price discrimination model extracts, without adding much to costs, the additional revenues shown in the darkened rectangular area of Figure 1.10c. The conditions that enable discrimination include

existence of monopoly power to regulate prices,
ability to segregate consumers with different elasticities of demand, and
inability of original buyers to resell the goods or services.

Such dynamic pricing or yield management strategies, as they are known, are commonly implemented in many different industries and may be beneficial to some consumers: For example, movie theaters may offer
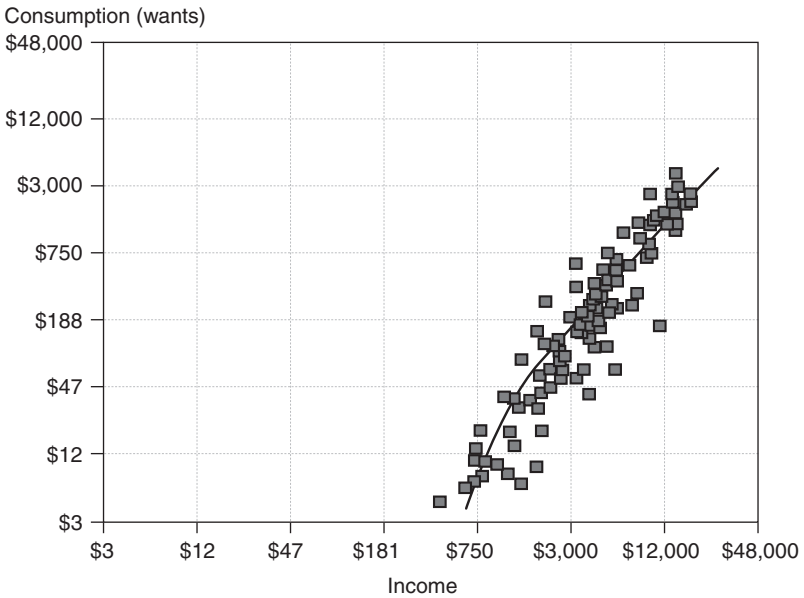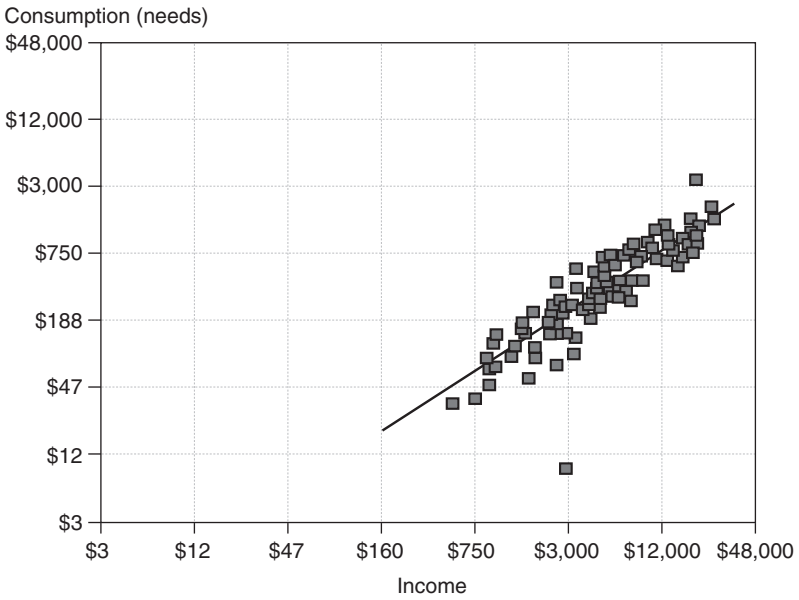
Consumption (needs)

Consumption (wants)

Figure 1.11. Needs (clothing) versus wants (recreation): income elasticity estimates in 116 countries, 2006.
Source: Cox and Alm (2007). Federal Reserve Bank of Dallas.

senior-citizen or matinee discounts that might not otherwise be available. And travelers willing to pay more for an airline ticket might be indirectly helping to reduce (i.e., subsidize) prices for those who are less willing. The extent to which subsidization of this type occurs will typically depend both on the industry-specific pricing conventions that have evolved over several business cycles and on the current intensity of competition in each consumer category.

Entertainment and media companies are especially able to advantageously apply price discrimination tactics by turning the introduction of important products and services into "events." Releases of some new books, music tracks, films, game software, and openings of casinos, theme park attractions, sporting events, and television shows are typically "eventized" as a means of tapping into the willingness of some consumers and advertisers to pay premium prices.

To this end, economists have categorized discrimination into three types (degrees):

1. Each customer/viewer/consumer is offered a different price based on presumed willingness to pay.
2. Variations of products and bundles of features are offered at different prices.
3. Different market and customer segments are charged different prices for a specific product.

Public-Good Characteristics

Public (nonrival) goods are those that can be enjoyed by more than one person without reducing the amount available to any other person; providing the good to everyone else is costless. In addition, once the good exists, it is generally impossible to exclude anyone from enjoying the benefits, even if a person refuses to pay for the privilege. Such nonpayers are therefore "free riders." In entertainment it is not unusual to find near-public-good characteristics: The marginal cost of adding one viewer to a television network program or of allowing an extra visitor into a theme park is not measurable. Spending on national defense or on programs to reduce air pollution is of this type. Public goods are thus non-rivalrous and non-excludable, whereas merit goods or services are provided by political decisions based on interpretations of need rather than ability or willingness to pay.

1.4 Personal-Consumption Expenditure Relationships

Recreational goods and services are those used or consumed during leisure time. As a result, there is a close relationship between demand for leisure and demand for recreational products and services.

Table 1.6. *PCEs for recreation in current dollars, selected categories,*
1990–2018[a]

Product or service by function	1990	2005	2018
Total recreation expenditures (goods + services)[a]	227.3	633.9	957.8
Percent of total PCEs	5.4	6.7	6.8
Amusement parks, campgrounds, etc.	19.2	33.6	65.8
Gambling (casino, track, lotteries)	23.7	72.9	142.6
Newspapers + periodicals	21.6	36.1	47.8
Books (edu + rec)	16.2	36.8	32.7
Cable TV + satellite services	18.0	54.6	96.0
Spectator amusements, total	14.4	43.7	78.8
Motion picture theaters	5.1	9.7	15.7
Spectator sports[b]	4.8	15.7	27.6

[a] In billions of dollars, except percentages. Represents market value of purchases of goods
    and services by individuals and nonprofit institutions. See *Historical Statistics, Colonial*
    Times to 1970, series H 878–893, for figures issued prior to 1981 revisions.
[b] Includes professional and amateur events and racetracks.
Sources: U.S. Bureau of Economic Analysis, The National Income and Product Accounts
(NIPA) of the United States, 1929–1976; and Survey of Current Business, July issues.

As may be inferred from Table 1.6, NIPA data classify spending on
recreation as a subset of total personal-consumption expenditures (PCEs).
This table is particularly important because it allows comparison of the
amount of leisure-related spending to the amounts of spending for shelter,
transportation, food, clothing, national defense, and other items.[29] For
example, percentages of all PCEs allocated to selected major categories in
2018 were:

Medical care	16.9%
Housing	18.3
Transportation	3.2
All recreation	6.8
Food (excluding alcoholic beverages)	7.2
Clothing	2.8

As may be seen in Figure 1.12, spending on entertainment services has
trended gradually higher as a percentage of all PCEs, whereas percentages
spent on clothing and food have declined.

That spending on total recreational goods and services responds to
prevalent economic forces with a degree of predictability can be seen in
Figure 1.13.[30] Figure 1.14 illustrates that PCEs for recreation as a percentage
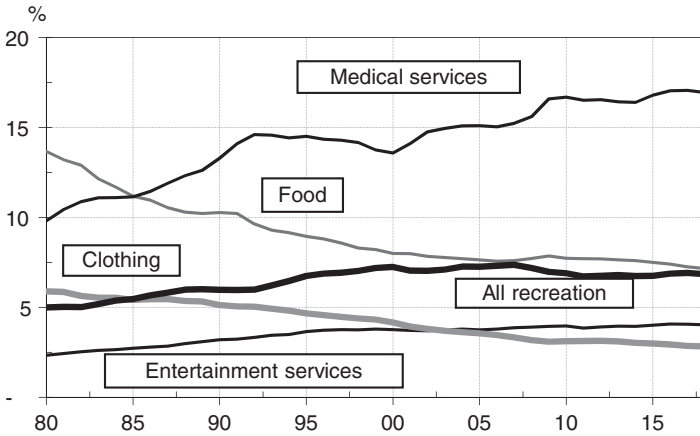of total disposable personal income (DPI) had held steady in a band of

Figure 1.12. Trends in percentage of total personal consumption expenditures in selected categories, 1980–2018.
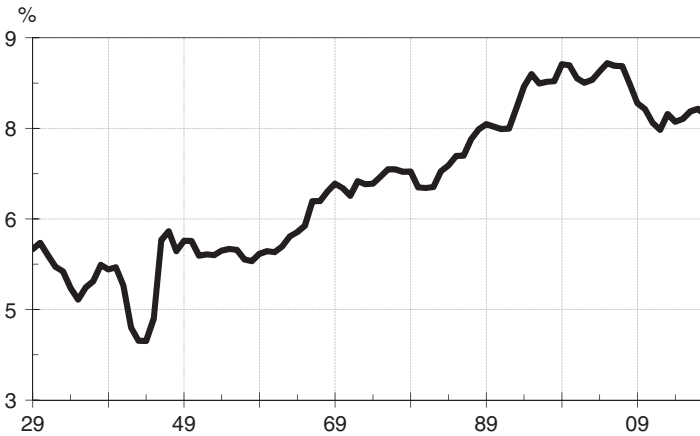

Figure 1.13. PCE for recreation as percentage of disposable income, 1929–2018.

roughly 5.0% to 6.5% for most of the 80 years beginning in 1929. New heights can only be achieved as a result of a relatively lengthy business cycle expansion, increased consumer borrowing ratios, demographic and household formation influences, and the proliferation of leisure-related goods and services utilizing new technologies.

Measurement of real (adjusted for inflation) per capita spending on total recreation and on recreation services provides yet another long-term view of how Americans have allocated their leisure-related dollars. Although the services subsegment excludes spending on durable products such as television sets, it includes movies, cable TV, sports, theater, commercial
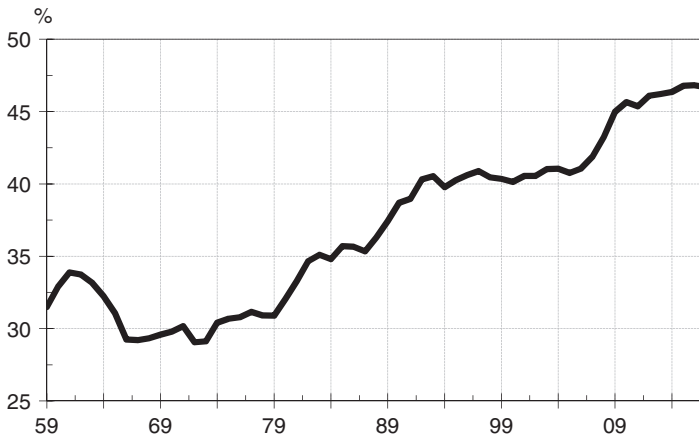
Figure 1.14. PCE on recreation services as percentage of total PCE on recreation, 1959–2018.
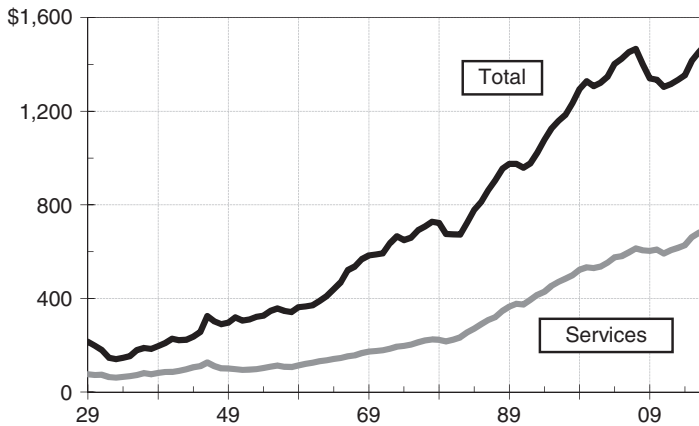

Figure 1.15. Real per-capita spending on total recreation and on recreation services, 1929–2018.

participant amusements, lotteries, and pari-mutuel betting. The percentage of recreation services spending is now above 40% of the total spent for all recreation (Figure 1.14), and a steeper uptrend in real per capita PCEs on total recreation and on recreation services beginning around 1960 is suggested by Figure 1.15.[31]

This apparent shift toward services, which is also being seen in other economically advanced nations, is a reflection of relative market saturation for durables, relative price-change patterns, and changes in consumer preferences that follow from the development of new goods and services.

As such, even small percentage shifts of spending may represent billions of dollars flowing into or out of entertainment businesses. And for many firms, the direction of these flows may make the difference between prosperous growth or struggle and decay.

Because various entertainment sectors differ in responses to changing conditions, extreme across-the-board external shocks such as the globally devasting coronavirus pandemic of early 2020 – and also the degree of recession resistance or cyclicity of the entertainment industry relative to that of the economy at large – are not well depicted by such time series.[32]

For example, broadcasting revenues depend on advertising expenditures, which in turn relate to total corporate profits. Yet, movie and game segments might occasionally move opposite to macroeconomic trends and, to effectively study these business cycle relationships, less aggregated data must therefore be used. Measures of what is known as the gross national product (GNP), or of the more recent standard of gross domestic product (GDP), can thus provide only a starting point for further investigations.[33]

In addition, financial analysts of entertainment and media industries ought to recognize that prices of energy-sources have the potential to greatly affect overall personal-consumption expenditures and to significantly alter sector growth patterns.[34] That's because a price decline of $10 a barrel corresponds roughly to a 0.25 percentage point gain in GDP growth over the following year.

If the world cannot indeed continue to produce the low-cost energy that has enabled consumers everywhere to spend an increasing part of their incomes on leisure, entertainment, and travel pursuits, growth of spending for these categories is likely to be severely constrained and/or diminished.

Patterns of oil production and consumption for the world and for the U.S. are shown in Figures 1.16 and 1.17, respectively. The data suggest that world production might be leveling in the range of 36 to 40 billion barrels a year and that prices, particularly since the late 1990s, have been trending higher but with unpredictably volatile movements over the short run.[35]

1.5 Price Effects

Prices are largely dependent on supply and demand factors related to particular goods or services. But economic policies and strategies implemented by governments and their central banks, which have the power to create or extinguish money and credit, often also have an important influence on whether overall prices are moving upward (inflation) or downward (deflation). Although notable episodes of inflation and deflation have occurred in many nations at many times in history, the tendency and preference is normally to allow prices to rise gradually (i.e., creep higher). As a result of compounding, though, even small annual increments in the
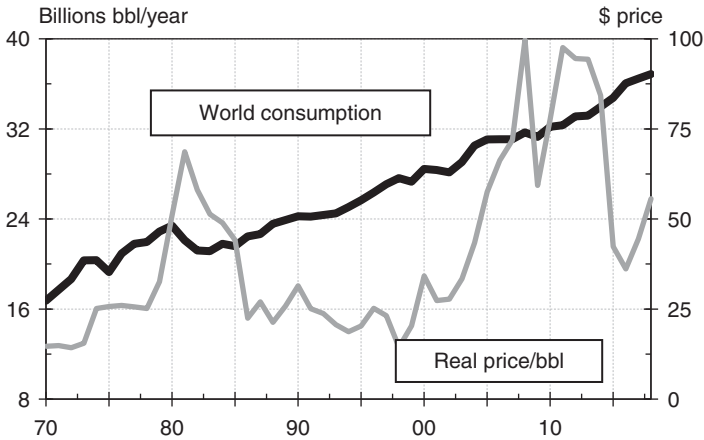
Figure 1.16. World crude oil consumption, billions of barrels per year, production closely tracks consumption, and real price per barrel in 2012 dollars, 1970–2018.
Sources: *International Energy Annual*, U.S. Energy Information Administration and www.eia.gov.
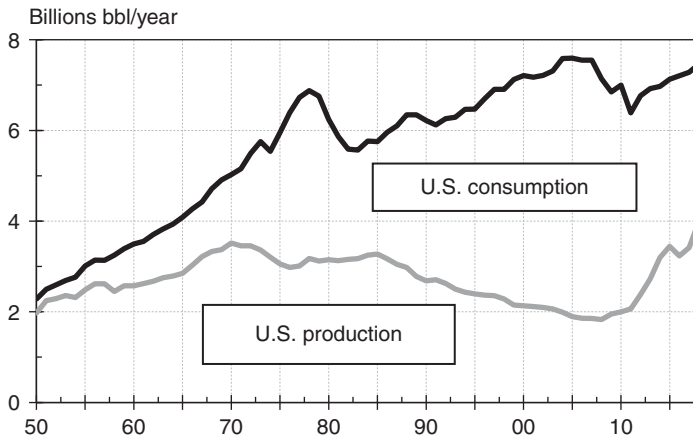

Figure 1.17. Crude oil production and consumption in the United States, billions of barrels/ year, 1950–2018.
Source: Annual Energy Review, U.S. Department of Energy; *International Energy Annual*, U.S. Energy Information Administration and www.eia.gov.

wholesale (producer or PPI) and consumer price (CPI) indexes will over time significantly erode the purchasing power of a country's currency, both internally and externally.

As a result, a dollar today reported as an average ticket price is not the same as one of yesterday or of ten years ago. In fact, in the United States,
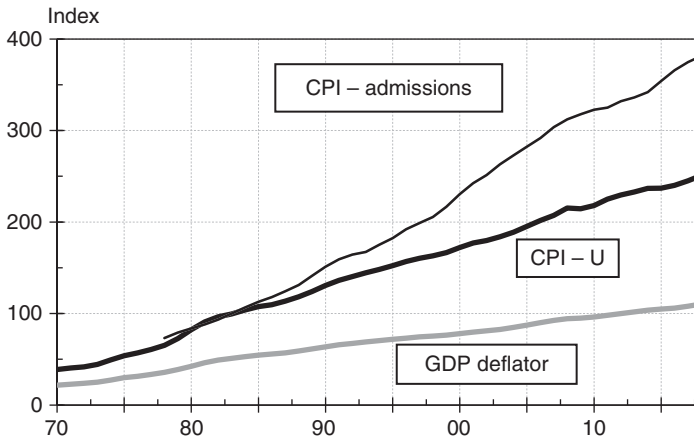
Figure 1.18. General price inflation indexes, CPI all items, admissions (movies, concerts, sporting events), 1984 = 100, and GDP deflator (2012 = 100), 1970–2018.

today's dollar has the purchasing power of and is equivalent to perhaps only two or three cents of 100 years ago. And prices that are rising merely at a compound rate of around 3% a year will approximately double in a little more than 20 years.[36] It is therefore important to be aware of such price effects when comparing data that are generated relatively far apart in time and to be careful when interpreting numbers that are stated as being "record-setting." Indexes of this kind are also criticized as being misleading because they are frequently revised (in data and methodology) and poorly capture changes in quality and technology (i.e., so-called hedonic factors).[37]

Price trends as reported by the U.S. Bureau of Labor Statistics using the CPI and GDP deflator series appear in Figure 1.18. The main take-away from the heavy dark line (CPI-U) is that overall prices have more than tripled since 1980 (from around 82 to 250 in 2018). But it is also clear that admission prices for entertainment events have risen even faster than the CPI-U.

1.6 Industry Structures and Segments

Structures

Microeconomic theory suggests that industries can be categorized according to how firms make price and output decisions in response to prevailing market conditions. In perfect competition, all firms make identical products, and each firm is so small in relation to total industry output that its operations have a negligible effect on price or on quantity supplied. At the other idealized extreme is monopoly, in which there are no close substitutes for the single firm's output, the firm sets prices, and there are barriers that

prevent potential competitors from entering. A natural monopoly, moreover, occurs when it is impossible for potential competitors to "contest" a market because high fixed or sunk entry costs cannot be recouped (as prices converge to equal marginal costs and the monopolist's economies of scale are large). Utility providers such as those distributing electricity, water, and cable television programming are typical examples.

In the real world, the structure of most industries cannot be characterized as being perfectly competitive or as monopolistic but as somewhere in between. One of those in-between structures is monopolistic competition, in which there are many sellers of somewhat differentiated products and in which some control of pricing and competition through advertising is seen. An oligopoly structure is similar, except that in oligopolies there are only a few sellers of products that are close substitutes and pricing decisions may affect the pricing and output decisions of other firms in the industry. Although the distinction between monopolistic competition and oligopoly is often blurred, it is clear that when firms must take a rival's reaction to changes of price into account, the structure is oligopolistic. In media and entertainment, industry segments fall generally into the following somewhat overlapping structural categories:

Monopoly	Oligopoly	Monopolistic competition
Cable TV	Movies	Books
Newspapers	Recorded music	Magazines
Professional sports teams	Network TV	Radio stations
	Casinos	Toys and games
	Theme parks	Performing arts
	Internet service and social media networks	
	Video game producers/distributors	

These categories can then be further analyzed in terms of the degree to which there is a concentration of power among rival firms.[38] A measure that is sensitive to both differences in the number of firms in an industry and differences in relative market shares – the Herfindahl–Hirschman Index – is frequently used by economists to measure the concentration of markets.[39]

Segments

The relative economic importance of various industry segments is illustrated in Figure 1.19(a–e), the trendlines of which provide long-range macroeconomic perspectives on entertainment industry growth patterns. These patterns then translate into short-run financial operating performance, as revealed by Table 1.7 and in which revenues, pretax

Table 1.7. *Entertainment and media industry composite sample, 2014–2018*

Compound annual growth rates (%): 2014–2018

Industry segment	No. companies in sample	Revenues	Operating income	Assets	Operating cash flow
Broadcasting (television & radio)	21	3.2	6.1	1.5	5.7
Cable (video subscription services)	19	8.4	6.8	6.8	3.2
Filmed entertainment	8	5.1	5.3	4.0	4.9
Gaming (casinos)	15	1.0	3.2	5.8	2.6
Internet	4	22.3	25.7	22.4	24.2
Music recorded)	6	15.1	37.4	7.5	36.7
Publishing (books, mags, newspapers)	17	−1.7	−1.1	−2.7	−1.5
Theatrical exhibition	5	−0.9	−2.9	2.3	−0.3
Theme parks	6	6.6	11.3	6.0	10.5
Toys	10	5.3	*3.2*	7.5	26.9
Total	111				

Total composite

	Pretax return (%) on			Operating		Operating
	Revenues	Assets	Revenues[b]	income[b]	Assets[b]	cash flow[b]
2018	24.7	13.8	746	184	1,336	269
2017	28.3	−14.7	679	192	1,304	241
2016	29.3	14.6	594	174	1,191	234
2015	29.2	15.3	539	157	1,030	203
2014	30.3	15.9	516	156	985	196
CARG[a]	4.9	−3.4	9.7	4.2	7.9	8.3

[a] Compound annual growth rate (%). Excluding Internet, growth would be much lower.
[b] In $ billions.
Source: Company reports.

operating incomes, assets, and cash flows (essentially earnings before taxes, interest, depreciation, and amortization) for a selected sample of major public companies are presented. This sample includes an estimated 80% of the transactions volume in entertainment-related industries and provides a means of comparing efficiencies in various segments.

Cash flow is particularly important because it can be used to service debt, acquire assets, or pay dividends. In representing the difference between cash receipts from the sale of goods and services and cash outlays required in their production of the same, operating cash flow is usually understood to be
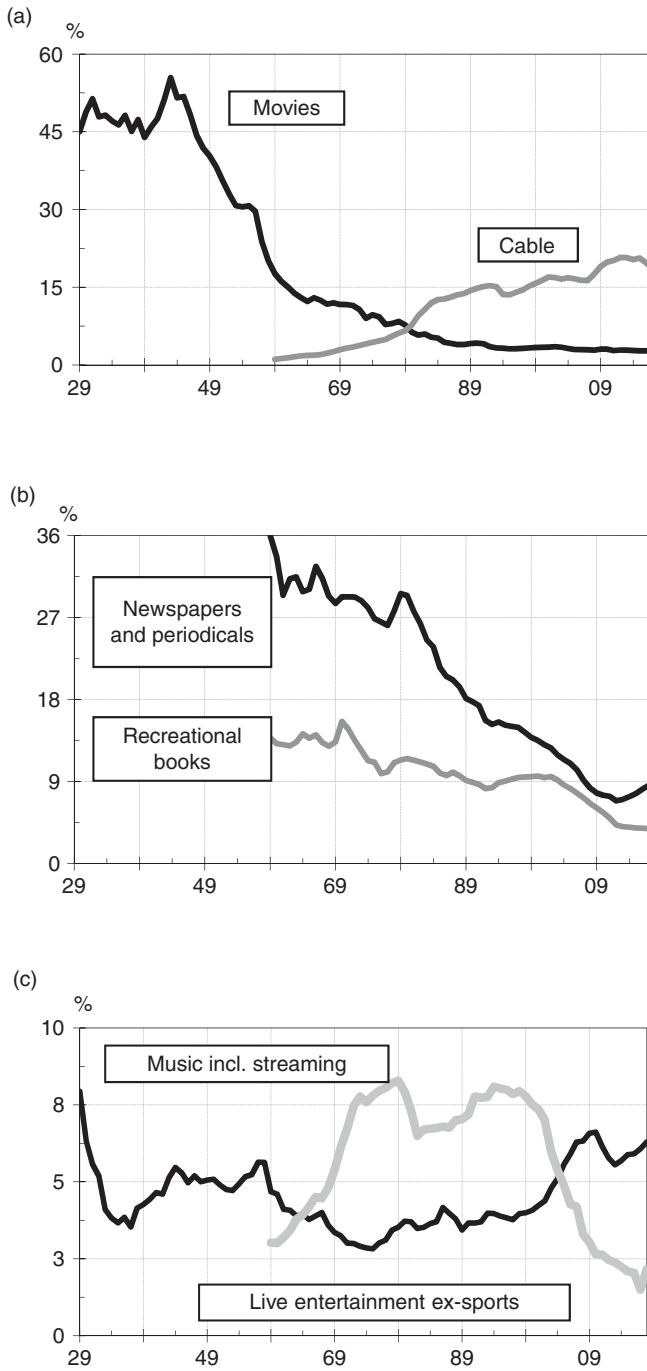
Figure 1.19. PCEs of selected entertainment categories as percentages of total PCE on recreation, 1929–2018 (*cont.*).
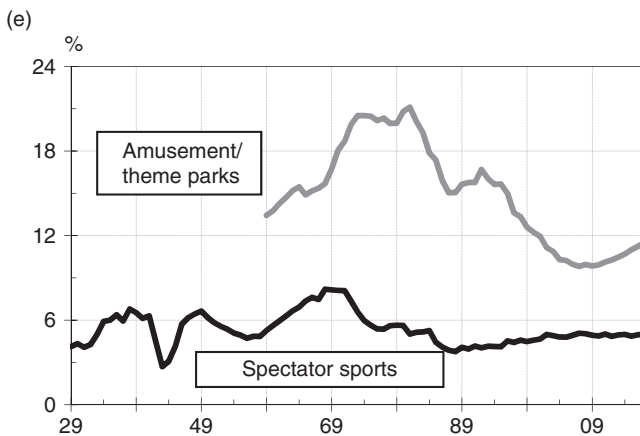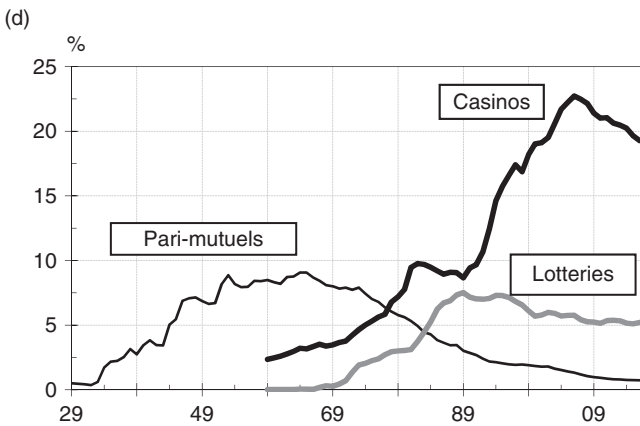
(d)

(e)

Figure 1.19. (*cont.*)

operating income (i.e., earnings) before deductions for interest, taxes, depreciation, and amortization (EBITDA). More recently and alternatively, operating income before depreciation and amortization (OIBDA) has been similarly applied.[40]

Although it has lost some analytical favor, cash flow (EBITDA) so defined has customarily been used as the basis for valuing all kinds of media and entertainment properties because the distortional effects of differing tax and financial structure considerations are stripped away. A business property can thus be more easily evaluated from the standpoint of what it might be worth to potential buyers.[41] Also, a trend of declining EBIT margins (i.e., EBIT/revenues) always suggests that companies are finding it more difficult to convert revenues into free cash – a situation that if sustained leads ultimately to lower share valuations.
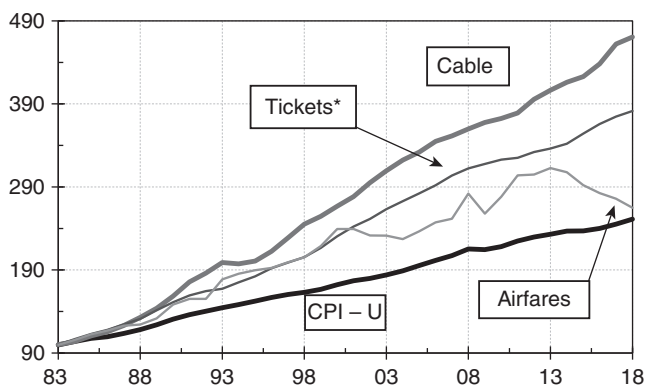
Figure 1.20. Cable service and ticket price indexes compared to CPI (1983 = 100), 1983–2018. *Ticket admissions to movies, theaters, and concerts. Annual average airfares in U.S. *Source:* Bureau of Labor Statistics.

More immediately, it can be seen further that sampled entertainment industries generated revenues (on the wholesale level) of about $750 billion in 2018 and that annual growth between 2014 and 2018 averaged approximately 9.7% (largely led by Internet companies). In this, PCEs for casinos, cable, and theme parks have long been far larger than for movies. Over the same span, which included a continuing rebound from a long and deep recession, operating income rose at a compound rate of 4.2%, with total assets rising by 7.9%.

A thorough analysis of the composites shown in Table 1.7 would nevertheless further require consideration of many features of the business environment, including interest rates, antitrust policy attitudes, the trend of dollar exchange rates, and relative pricing power. This last factor is suggested by Figure 1.20, which compares the rise of the Consumer Price Index for two important entertainment segments (and also airfares) against the average of all items for all urban consumers (CPI-U). From this, it can be seen that cable television service prices have been rising at well above average rates.

Although economists also examine various segments through the use of what are known as input–output (I/O) tables, such tables are more robustly employed in the analysis of industrial products and commodities and in travel and tourism (through use of Tourism Satellite Accounts) than they are in entertainment and media services. A typical I/O table in entertainment, for example, would indicate how much the advertising industry depends on spending by entertainment companies.[42]

Finally, an indexed comparison of the percentage of personal-consumption expenditures going to different segments reveals the effects of changes in technology and in spending preferences. Three such trends are reflected in Figure 1.21, which illustrates the indexed percentages of total PCEs going to movie admissions, spectator sports, and live entertainment
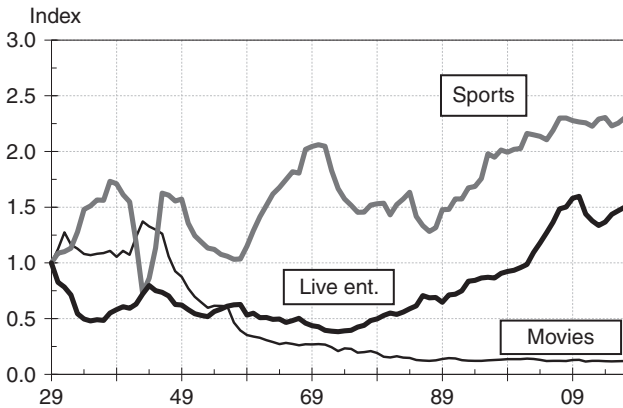
Figure 1.21. Indexed personal consumption expenditures on spectator sports, live entertainment, and movie theater admissions as a percentage of total PCEs (1929 = 1.0), 1929–2018.

(including legitimate theater, opera, and entertainments of nonprofit institutions, i.e., "performing arts"). Interestingly, since around 1980, live entertainment, with a boost from relatively rapidly rising prices, had until recently gained in comparison with the percentage spent on spectator sports. Meanwhile, though, the percentage of PCE spending for movie tickets has fallen sharply now that technology has provided many other diversions and/ or alternative means of seeing films (e.g., on DVDs, satellite or cable television hookups, or Internet downloads and streams).

1.7 Valuation Variables

Important as it is to understand the economic perspectives, it is ultimately the role of the financial analyst to condense this information into an asset valuation estimate. The key question for investors is whether the market is correctly pricing the assets of an industry or of a company. In attempting to arrive at an answer, analysts find that valuation of assets often involves as much art as it does science.

Valuation methods fall into three main categories of approaches, using discounted cash flows, comparison methods, and option-pricing models. Sometimes all three approaches are suitable and the results are judged. At other times, the characteristics of the asset to be valued are such that only one approach is used. In most cases, however, the central concept is discounted cash flow, which takes account of both the time value of money and risk.

Discounted Cash Flows

Given that the primary assets of media and entertainment companies are most often intangible and are embodied in the form of intellectual property
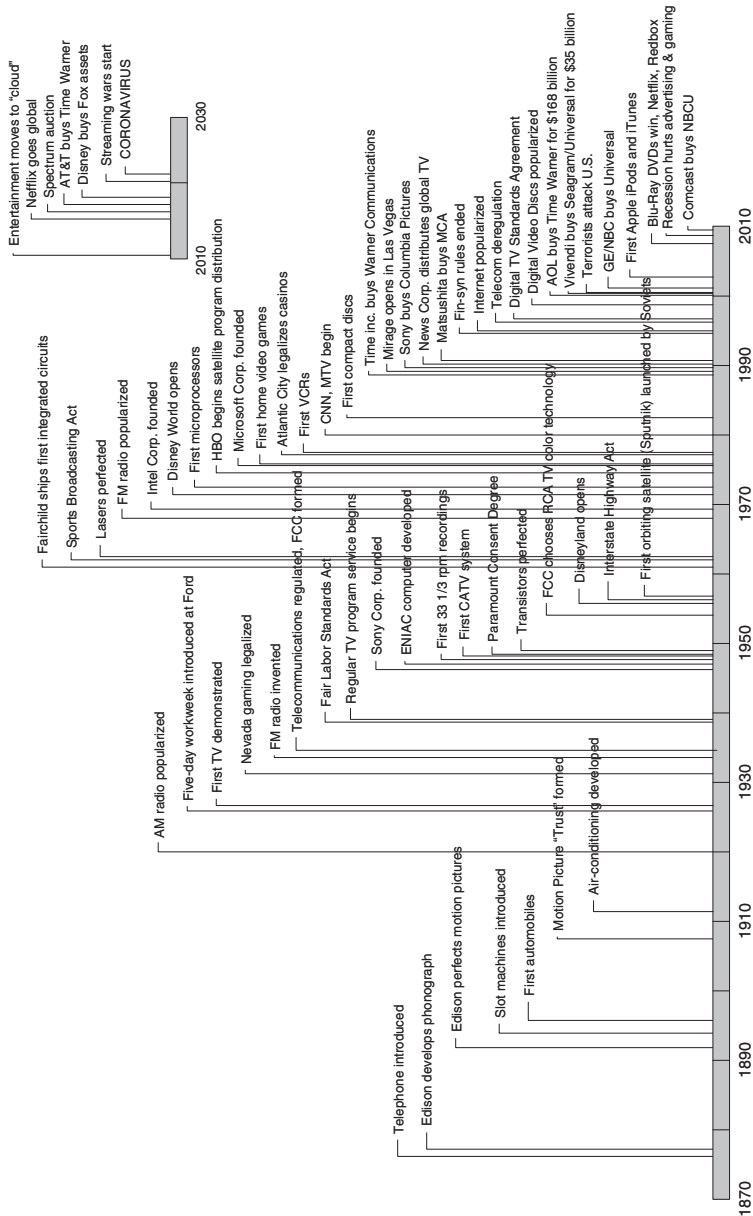
Figure 1.22. Entertainment industry milestones, 1870–2018.

rights, it makes sense to base valuations on the expected profits that the control of such rights might reasonably be expected to convey over time. Although it is not a flawless measure, estimated cash flow (or perhaps EBITDA) discounted back to a present value will usually well-reflect such profit potential as long as the proper discount rate is ascribed: Cash flow to equity (i.e., after interest expenses and principal payments) must use a cost of equity capital discount rate, whereas cash flow to the firm (i.e., prior to interest expenses and principal payments) would use a weighted average cost of capital (WACC) discount rate.

Essentially, the discounted cash flow approach takes the value of any asset as the net present value (NPV) of the sum of expected future cash flows as represented by the following formula:

$$NPV = \sum_{t=1}^{n} CF_t/(1+r)^t$$

where r is the risk-adjusted required rate of return (tied to current interest rates), CF_t is the projected cash flow in period t, and n is the number of future periods over which the cash stream is to be received.

To illustrate this most simply, assume that the required rate of return is 9%, that the projected cash flows of a television program in each of the next three years are $3 million, $2 million, and $1 million, and that the program has no value beyond the third year. The NPV of the program would then be $3/(1.0+0.09)+2/(1.0+0.09)^2+1/(1.0+0.09)^3 = 2.75+1.683+0.7722 = \$5.205$ million.

Comparison Methods

Valuations can also be made by comparing various financial ratios and characteristics of one company or industry to another. These comparisons will frequently include current price multiples of cash flows and estimates of earnings, shareholders' equity, and revenue growth relative to those of similar properties. One of the best yardsticks for comparing global companies that report with different accounting standards is a ratio of enterprise value (EV) to EBITDA. Enterprise value, subject to adjustment for preferred shares and other off-balance-sheet items, equals total common shares outstanding times share price (i.e., equity capitalization) plus debt minus cash.

Of course, a ratio of price to cash flow, earnings, revenues, or some other financial feature should – but opportunistically may not – already inherently reflect the estimated discounted cash flow and/or salvage (terminal) values of an asset or class of assets. If cable systems are thus being traded at prices that suggest multiples of ten times next year's projected cash flow, it is likely that most other systems with similar characteristics will also be priced at a multiple near ten.

In valuations of entertainment and media assets, this comparative-multiple approach is the one most often used, even though it might not fully capture what economists call externalities – those factors that would make a media property especially valuable to a specific buyer. Prestige, potential for political or moral influence, and access to certain markets are externalities that ordinarily affect media transaction prices.

Options

For assets that have option-like characteristics or that are traded infrequently, neither the discounted cash flow nor the price and ratio comparison approach can be readily applied. Instead, option-pricing models (e.g., the Black–Scholes model) that use contingent claim valuation estimates (of assets that pay off only under certain contingencies and assumed probability distributions) are usually employed. Specialized option contracts are regularly used in many entertainment and media segments (see Chapter 13).

With the possible exception of start-up Internet shares in the late 1990s, however, this approach has not normally been used in entertainment industry practice unless the asset to be valued is an option contract (e.g., a warrant, call, or put) or is a contract for marketing or distribution rights or for some form of intellectual property right (e.g., a patent).[43]

1.8 Concluding Remarks

This chapter has sketched the economic landscape in which all entertainment industries operate. It has indicated how hours at work, productivity trends, expected utility functions, demographics, and other factors can affect the amounts of time and money we spend on leisure-related goods and services. It has also provided benchmarks against which the relative growth rates and sizes of different industry segments or composites can be measured. For example, as a percentage of disposable income, U.S. PCEs for recreation – encompassing spending on entertainment as well as other leisure-time pursuits – first rose to well over 6% in the 1980s.

In all, entertainment is big business: At the wholesale level, it is now generating annual revenues exceeding $700 billion. Moreover, as measured in dollar value terms, entertainment has consistently been one of the largest net export categories (at least $20 billion in 2019) for the United States.[44] Entertainment in all its forms has also always provided otherwise unavailable experiences to consumers and participants. Unlike many consumer products and services – which are intermediaries demanded as a means to reach another end (e.g., an airplane trip to visit customers) – entertainment is directly desired and consumed for the experiences and enjoyment that it inherently provides. As such, entertainment provides

unique value as it reflects the interests and motivations, career trajectories, language, and political discourses of society at large.[45]

Technological innovation has obviously played an important role. It underlies the growth of productivity and thus of the relative supply of leisure time. Just as significantly, technological advances as tracked in Figure 1.22, have changed the way in which we think of entertainment products. Such products – whether movies, music, TV shows, video games, or words – must now be regarded as composite bits of "information" that can be produced, processed, and distributed as series of digits; coded bursts of zeros and ones that can represent sounds, pictures, and texts. Already, this has greatly altered the entertainment industry's economic landscape and propelled sequential movement through time from the vaudeville of the 1880s, to films, then radio, broadcast TV, cable networks, and now, streaming.

The past, then, is not a prologue – especially in a field where creative people are constantly finding new ways to turn a profit. The wide-ranging economic perspectives discussed in this chapter, however, provide a common background for all that follows.

Notes

1. Kraus (1978, p. 38) and Neulinger (1981, pp. 17–33) have noted this. Similarly, the concept of *play* has been studied under the disciplines of sociology and psychology. The Dutch anthropologist Johan Huizinga in his book *Homo Ludens* (Man the Player, 1955) advanced the notion that play might be its own end. Huizinga (1955, p. 8) notes that the first main characteristic of play is "that it is free, it is freedom. A second characteristic . . . is that play is not 'ordinary' or 'real' life." It also demands order, casts a spell over us, and contains elements of tension and solution, such as in gambling. In brief, play is a form of instinctive behavior unregulated by conscious thought. See also Henig (2008).

Torkildsen (1999, p. 93) makes further distinctions between play, recreation, and leisure. *Play* activity is "freely chosen and indulged in for its own sake and for the satisfaction it brings in the doing: it exhibits childlike characteristics of spontaneity, self-expression and a creation of its own special meaning . . . *Recreation*, unlike play, appears to need to be justified . . . It carries greater social responsibilities than leisure . . . *Re-creation* is another meaning. In its purest sense, it is characterized by an inner-consuming experience of oneness that leads to revival . . . *Leisure* is perceived in different ways – time, activity, experience, state of being, a way of life, and so on . . . It can encompass play and recreation activity." Here, recreation, play, and leisure concepts form partially overlapping circles centered on pleasure. See also Roberts (1995) and Balestrino (2011) on economics of leisure.

2. In Henig (2008), former psychiatrist and president of the National Institute for Play Stuart Brown is quoted as saying that there are "dangerous long-term consequences of play deprivation," and that "play is as fundamental as any other aspect of life, including sleep and dreams."

3. De Grazia (1962, p. 13) notes that it is obvious that "time on one's hands is not enough to make leisure," and free time accompanied by fear and anxiety is not leisure. Aristotle's concept of leisure and work and the connections to culture are more deeply discussed in Pieper (2009). See also De Grazia (1962, p. 19), Henig (2008), Rojek (2010), and Surdam (2015).

4. Kaplan (1960) defines leisure as a composite that includes creation of pleasant expectations and recollections, requires minimal social-role obligations, involves a psychological perception of free, and is often characterized by play.

5. Gilder (2018, p. 47). See also Hamermesh (2019).

6. Klein (2001, pp. 118–19) writes that by the early 1920s, college football and tennis had become popular, that "[M]ore and more Americans wanted to play and to be entertained," and that there was a hunger for amusement and diversion.

7. As Smith (1986, p. 8) has further noted, such surveys indicate that for full-time, day-shift plant workers, the average workweek decreased by 0.8 hour between 1973 and 1985 but that over the same period, "the schedule of full-time office workers in the private sector rose by 0.2 hour, with the result that the workweek of these two large groups converged markedly." Hedges and Taylor (1980) show that hours for full-time service workers declined faster than for white-collar and blue-collar employees between 1968 and 1979. And the Bureau of Labor Statistics estimated that the percentage of nonagricultural salaried jobs in which the workweek exceeded 49 hours rose to 18.5% in 1993 as compared with 14.2% in 1973. Through World War I Americans regularly worked six days a week, and it was not until after passage of the Fair Labor Standards Act in 1938 that overtime pay and a 40-hour workweek became the norm.

8. A Louis Harris nationwide survey found that the estimated hours available for leisure had been steadily decreasing from 26.2 hours per week in 1973 to 16.6 hours per week in 1987. Since 1989 this has stabilized at around 20 hours. Harris argues that an apparent combination of economic necessities and choices by women who want to work has increased the number of families in which both husbands and wives hold jobs. See Gibbs (1989).

9. Schor (1991, p. 29) wrote that between 1969 and 1987, "the average employed person is now on the job an additional 163 hours, or the equivalent of an extra month a year … and that hours have risen across a wide spectrum of Americans and in all income categories." These estimated changes in hours worked appear strikingly high, however. Although the analysis could have been correct in catching the direction of change, it might have mistakenly estimated its magnitude. Schor's book is so politically imbued with an anticapitalist theme that the methodology and the objectivity of its findings are suspect. See also Robinson and Godbey (1997), and Kimmel (2008). Effects on work hours during the 2007–9 recession are discussed in Kroll (2011).

10. Robinson (1989, p. 35) found, for example, that "people aged 51 to 64 have gained the most free time since 1965, mainly because they are working less. Among people in this age group, the proportion of men opting for early retirement increased considerably between 1965 and 1985." Robinson and Godbey (1997) suggest that Americans, in the aggregate, have more time for leisure because of broad trends toward younger retirements and smaller families. Except for parents of young children, or those with more than four children under 18, everyone else, they say, has gained at least one hour per week since 1965. Hamermesh (2019) provides time-spending details.

11. Roberts and Rupert (1995) state that the presumption of declining leisure is a fallacy, "Previous studies purporting to have uncovered such a fact have not adequately disentangled time spent in home production-activities … from time spent enjoying leisure activities. [W]hile hours of market work and home work have remained fairly constant for men since the mid-1970s, market hours have been rising and home production hours have been declining for women … Possible reasons include an increase in market versus nonmarket productivity or labor-saving technological advancements in the home."

Rones, Ilg, and Gardner (1997) concluded that, between 1976 and 1993, "after removing the effect of the shifting age distribution, average weekly hours for men showed virtually no change (edging up from 41.0 to 41.2 hours), and the average workweek for women increased by only a single hour [but] ... a growing proportion of workers are putting in very long workweeks ... This increase is pervasive across occupations, and the long workweek itself seems to be associated with high earnings and certain types of occupations." See Owen (1976, 1988), Kirkland (2000), and Shelley (2005). The U.S. Federal Government approved funding in December 2000 for an American Time Use Survey of Activity.

12. Divergence of results in studying hours of work may be caused by differences in how government data are used. For example, such data generally are based on hours paid rather than hours worked. This means that a worker on paid vacation would be counted as working, even though he or she was not. Also, hours per job rather than hours per worker are used. The shift in work-hour trends in Europe is a function of competition from low-wage countries and is discussed in Landler (2004) and Prescott (2004), in which it is found that marginal tax rates account for differences in the relative labor supplied as measured by hours worked per person aged 15–64 in the taxed market sector.

13. Rybczynski (1991a, b) provides a detailed history of the evolution of the weekend, and Spring (1993) provides a study of the popularity of spare-time activities classified by day of the week. Television viewing, consuming one-third of free time on weekdays and one-fourth on weekends, leads the list by far on every day of the week. Veal (2007) provides a broad survey of the economics of leisure, and Cameron (2011) collects studies on the economics of leisure. A history of leisure time, spending preferences, and elasticities for 1890–1940 appear in Bakker (2011).

14. Studies comparing time allocation in different countries can be found in Juster and Stafford (1991), where, for example, it can be seen that both men and women allocate more time to leisure in the United States than in Japan or Sweden. Bell and Freeman (2000), however, explain that the differences in hours worked in different countries are related less to cultural values than to a greater diversity of wages, the effects of number of hours worked on future compensation, and less job security in the United States than elsewhere. They find that an American working 2,000 hours per year who increases that by 10%, to 2,200 hours, can generally expect a "1% increase in future wages."

15. The apparently reduced rate of improvement between 1973 and 1990 can be attributed to many different factors, especially including unexpected sharp cost increases for energy and capital (interest rates) costs. McTague (2005) covers the economic effects from off-the-books transactions.

16. In most mathematical presentations, the independent variable or the "cause" of change is presented along the horizontal *x*-axis and the dependent variable on the vertical *y*-axis. Economists, however, have generally found it more convenient to depict prices (the independent variable) and quantities by switching the axes. Thus, prices are usually seen on the vertical axis and quantities on the horizontal one. Werner (2005, p. 326) notes that "the variable that produces the equilibrium in this model is price. However, to achieve this outcome, perfect information is required. If there is imperfect information, there is no guarantee that equilibrium will ever be obtained. It would be pure chance if demand equaled supply."

17. See Haskel and Westlake (2018).

18. In Linder (1970), standard indifference-curve/budget-line analysis is used to show how the supply of labor is a function of income and substitution effects. The standard consumers' utility function is $V = f(Q, T_c)$, where Q is the number of units of consumption

goods and T_c is the number of hours devoted to consumption purposes. Two constraints are $Q = pT_w$ and $T = T_w + T_c$, where p is a productivity index measuring the number of consumption goods earned per hour of work (T_w) and T is the total number of hours available per time period.

To maximize utility, V now takes the Lagrange multiplier function

$$L = f(Q, T_c) + \lambda[Q{-}p(T{-}T_c)],$$

which is then differentiated with respect to Q, T_c, and the multiplier λ.

19. See Trost (1986) and *Monthly Labor Review*, 11, November 1986, U.S. Department of Commerce, Bureau of Labor Statistics.

20. Owen's (1970) study of these issues leads to a model supporting the hypothesis of a backward-bending labor-supply curve and suggesting that demand for leisure activity has positive income and negative price elasticities consistent with economic theory.

21. Utility can often be visualized in the form of a mathematical curve or function. For instance, the utility a person derives from the purchase of good x might vary with the square root of the amount of x (i.e., $U(x)$ = square root of x). Also see Section 11.5 and Levy and Sarnat (1972).

22. The quotation is from Barrett (1974, p. 79). Taking this a step further, one finds that a marginal rate of substitution (MRS) between good x and good y can then be presented in the form of *indifference curves* that are a ratio of the marginal utility (MU) of x to the marginal utility of y, and along which utility is constant. The underlying assumption is that of diminishing marginal utility, which means that the curves never intersect and are negatively sloped and generally convex to the origin.

23. See Van Boven and Gilovich (2003). Lancaster (1966, 1971) developed the consumption characteristics approach. Scitovsky (1976) wrote on the psychology of happiness and satisfaction. Travel, like entertainment, is based on desire for experiences. A 2016 study commissioned by Booking.com and appearing in *HNN Newswire*, November 29, 2016, questioned people from 17 countries and found among other things that 77% of people book a holiday to cheer themselves up.

24. A dependency ratio is the number of people who are net consumers (children and senior citizens) divided by the number of net producers; see, for example, Burton and Toth (1974) and Gladwell (2006b).

25. Regulation is often deemed politically necessary to offset alleged imperfections in the market economy. At times, for example, there have been movements to contain monopoly power, to control excessive competition, to provide public goods, and to regulate externalities.

26. Elasticities are also often taken at a point and expressed in the calculus as $\varepsilon_p = -(p/q) \times (dq/dp)$, where q is a measure of quantity of units demanded and p is price per unit. Historical comparisons studied by Costa (1997) show that from 1888 to 1991 expenditure elasticities have fallen from around two to around one currently. The decline is attributed to rising incomes, falling prices of recreation, and investment in public recreational goods.

27. A fourth classification, merit goods, is also sometimes used to describe spending on culture, arts, and education. This is not accepted by all economists, however. The concept originated with public finance pioneer Richard Musgrave. The term "positional goods" is also sometimes used to describe, say, works of art. McAndrew (2010, pp. 17–18) explains that such goods are "rare and unique enough to be socially distinguished, and an ability to purchase them generally depends on one's relative rather than absolute economic condition.

Works of art are positional goods in the sense that their supply cannot be augmented in the same manner as other goods." There are also "Giffen goods" in which people consume more as the price rises. For such goods, the income effect is stronger than the substitution effect. See also Towse (2010, p. 35).

28. Cox and Alm (2007) show that as incomes rise, elasticities generally tend to rise for services, medicine and health care, education, and communications and transportation. These relationships are consistent with the notion of utility maximization and are often expressed in what are known as Engel curves which show how the quantity demanded of a good or service changes as the consumer's income level changes. However, estimates typically have low explanatory power.

The study of wants and needs is also closely related to and in keeping with psychologist Abraham Maslow's 1943 hierarchy of needs, often shown as a pyramid, with self-actualization at the top, followed by esteem, love/belonging, safety, and physiological at the base. See Maslow (1943, 1954).

29. The table, however, does not do justice to the cable TV casino, and Internet spending categories, which have been among the largest and fastest-growing segments.

30. Both Figure 1.14 and Supplementary Table S1.1 are based on NIPA data series.

31. The entertainment services series as a percentage of total recreation spending has demonstrated considerable volatility since 1929. This series hit a peak of nearly 50% in the early 1940s, when there were relatively few consumer durables available. Then, for a dozen or so years ending in the late 1970s, the percentage was confined to a fairly narrow band of 33% to 36%. Costa (1997) shows that in the late 1880s less than 2% of household expenditures went for recreation and around 75% of income for food, shelter, and clothing. By 1991, recreation spending was more than 6% of budgets.

32. On recession sensitivity, see Gao, Kim, and Zhang (2013).

33. GNP measures output belonging to U.S. citizens and corporations wherever that output is created, whereas GDP measures the value of all goods and services produced in a country no matter whether that output belongs to natives or foreigners. In actuality, in the United States, the differences between the values of the two series have been slight.

Revisions in GDP accounting methods are made every few years, and those that appeared in 2013 are most important to the entertainment and media segments. A series of articles by Soloveichik (2013a–e) – available at: bea.gov/papers/working_papers.htm – relate how intellectual property products (IPP), including movies, television shows, music, books, and artwork, are now treated as capital assets that, like other capital assets, are affected by changes in productivity and depreciate over time. A change to treatment of copyrighted material as an investment activity, in effect a switch from expensing to capitalizing, likely changes short-term estimates of GDP growth, as Soloveichik and Wasshausen (2013) explain.

Critics of National Income Accounting, for example Cobb, Halstead, and Rowe (1995), argue that GDP measurements allow activities in the household and volunteer sectors to go entirely unreckoned and are grossly misleading. As they put it, "GDP does not distinguish between costs and benefits, between productive and destructive activities, or between sustainable and unsustainable ones. The nation's central measure of well-being works like a calculating machine that adds but cannot subtract . . . The GDP treats leisure time and time with family the way it treats air and water: as having no value at all" (pp. 64–7). See also Uichitelle (2006) and Zencey (2009), who says that the "basic problem is that gross domestic product measures activity, not benefit." Stiglitz, Sen, and Fitoussi (2010) discuss additional problems in viewing economic activity through GDP metrics.

34.   As of 2015, cloud computing – on which many smartphone apps, social networks, mass multiplayer games, and other Internet-based services depend – already consumes around 3% of all the electricity generated. See Glanz (2012).

35.   The United States absorbs around 20% of world production (China a bit more in 2017), of which approximately two-thirds of consumption goes to fuel cars, trucks, and planes. See Schwartz (2008) for historical perspectives. Hubbert's Peak and the projected end-of-oil period are discussed in Deffeyes (2005), Campbell (2004), Goodstein (2004), Maxwell (2004), and Gold and Davis (2007), in which it is suggested that the peak global production ceiling is probably around 100 million barrels a day. Maass (2005), Simmons (2005), Bryce (2008), King (2008), and Strauss (2011) discuss potential shortfalls. Corsi and Smith (2005), Mills (2008), Mills (2017), Radetzki (2010), Luskin and Warren (2015), Lynch (2015), and Aguilera and Radetzki (2016) suggest that there will be *no* shortages. See Mann (2013) on fracking and methane hydrate and Epstein (2014), who makes a stong case for the use of fossil fuels. See also Vogel (2016, p. 42) and Helman (2013).

36.   A handy shortcut is known as the "rule of 72," which allows approximation of the time it takes for an amount to double. Thus, a compound rate of growth of 3% divided into 72 suggests that the initial amount would double in 24 periods.

37.   Price indexes come in several versions; CPI-U for all items and urban consumers, CPI-W for wage earners, and a GDP deflator series. The GDP deflator series does not generally rise as fast as those measuring CPIs. An illustration of hedonic effects is that a desktop computer of 1980 was primitive compared with those of today, yet it cost a lot more in inflation-adjusted terms.

38.   Dennis and DeFleur (2010, pp. 12–14, 89) present a concise definition of mass media based on the early work of political scientist and communications theorist Harold D. Lasswell, who concluded that mass media provides surveillance of the environment, correlates various parts of society, and transmits the social heritage from one generation to another.

39.   The Herfindahl–Hirschman Index (HHI) – used by the Department of Justice in determining whether proposed mergers ought to be permitted – is calculated as the sum of the squared market shares of competitors in the relevant product and geographic markets

$$\text{HHI} = \sum_{i=1}^{n} S_i^2,$$

where S is the market share of the ith firm in the industry and n equals the number of firms in the industry. Generally, near-monopolies would have an *HHI* approaching 10,000, modest concentration would fall between 1,000 and 1,800, and low concentration would be under 1,000.

The *Gini coefficient* or index, originated by sociologist Corrado Gini in 1912 to measure income inequality, is also used to express concentration in markets. When everyone has the same income or share, the coefficient is zero. And when there is maximal inequality, the coefficient is one (or 100%). On a graph, using income distribution, the cumulative share of *people* from lowest to highest incomes goes from left to right on the *x*-axis and the cumulative share of *income earned* appears on the *y*-axis. A 45-degree straight line indicates perfect equality. See also Noam (2009).

Such concentration measures are probably not as useful and precise as when applied in many other industries because entertainment and media companies tend toward a "frenemies" business model in which companies will often cooperate with

each other even while they compete vigorously. For example, Twenty-First Century Fox has its own network that competes for ratings against the ABC broadcast network, even though ABC uses the Fox-produced *Modern Family* to compete for ratings dominance. Similarly, Fox produced *It's About Us*, which had been a ratings winner for NBC.

40. OIBDA eliminates the uneven effect across company business segments of noncash depreciation of tangible assets and amortization of certain intangible assets that are recognized in business combinations. The limitation of this measure, however, is that it does not reflect periodic costs of certain capitalized tangible and intangible assets used in generating revenues. OIBDA also does not reflect the diminution in value of goodwill and intangible assets or gains and losses on asset sales. In contrast, free cash flow (FCF) is defined as cash from operations less cash provided by discontinued operations, capital expenditures and product development costs, principal payments on capital leases, dividends paid, and partnership distributions, if any.

41. Enthusiasm for the use of EBITDA as an important metric of comparison has waned in light of the accounting scandals of the early 2000s. Increasingly, investors appear to favor measures of free cash flow and net earnings, especially now that the rules for writing down goodwill have been changed (see Chapter 5), and given that EBITDA does not indicate the detrimental effects of high and rising debt obligations on balance sheets and rising interest expenses on net earnings. More emphasis is also being placed on return on invested capital (ROIC), defined as $\text{EBIT}(1 - \text{tax rate})/[(\text{Debt} + \text{Equity}) - (\text{Cash} + \text{Equivalents})]$. See Benoit (2016).

42. I/O accounts show how industries interact; specifically, they show how industries provide input to, and use output from, each other to produce gross domestic product (GDP). These accounts provide detailed information on the flows of the goods and services that make up the production process of industries. I/O accounts are presented in a set of tables: Use, Make, Direct Requirements, and Total Requirements. The Use table shows the inputs to industry production and the commodities that are consumed by final users. The Make table shows the commodities that are produced by each industry.

43. See also Lev (2001) for a discussion of measurement and valuation of intangibles.

44. *The Annual Survey of the Information Sector* (NAICS 51) that is released by the U.S. Census Bureau shows (in Table 3.0.2) that for 2007, software publishers exported $18.8 billion, and the motion picture and sound recording industries exported $14.8 billion. Imports were unlikely to be anywhere close to these amounts. As noted by the U.S. Department of Commerce (1993, p. 20), net exports (using country-based rather than firm-based measurements) of motion picture and television programming amounted to $2.122 billion in 1991. Also, according to the OECD Services, *Statistics on International Transactions* Table A-21, net U.S. film and television exports in 1994 were $2.48 billion as compared with $195 million in 1980. See also Bernstein (1990), who discusses the implications of global acceptance of American entertainment products and services, *Variety*, January 9, 1991, and the U.S. Census Bureau FT 900 reports available at: www.census.gov/foreign-trade/Press-Release /current_press_release/ft900.pdf. Estimates based on different data and *not* netted against imports appear in *Copyright Industries in the U.S. Economy, The 2016 Report*, prepared by Stephen E. Siwek Economists Incorporated (Washington, DC) for the International Intellectual Property Alliance (www.iipa.com). This report indicates that in 2015, sales and exports of motion pictures, TV, video, music, books, software, periodicals, and newspaper amounted to $177 billion.

45. Hennig-Thurau and Houston (2019, chap. 2) cover these aspects in greater detail.

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