

# 13

## Performing arts and culture

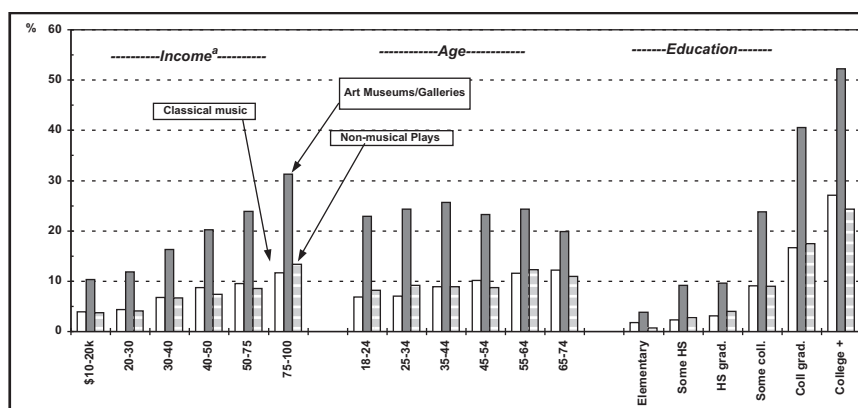
*Break a leg!*

It has been said of all the arts generally that they are a product of disciplined virtuosity in which you are the resource that perceives the value.<sup>1</sup> As such, then, the performing arts in particular generate income that is more psychic than pecuniary and they operate under somewhat different economic assumptions than the other entertainment industries thus far discussed. In fact, many organizations in this segment are nonprofit, requiring for their very existence substantial subsidy from government and private-foundation grants and from contributions by individuals.

Although the fundamental creative processes in the performing arts have remained essentially unchanged for centuries, technological developments have been important in mitigating the pernicious effects of inexorably rising costs. Fortunately, it still doesn't cost anything to wish performers well by telling them to "break a leg."

### 13.1 Audiences and offerings

The potential widespread appeal of live performances notwithstanding, there are severe time and financial constraints that limit audience size and scope.



**Figure 13.1.** Characteristics of the culture audience by income distribution, educational attainment, and age in selected performance categories. Bars show the percentage of survey respondents participating. *Source:* U.S. NEA survey (2008). <sup>a</sup>Income based on 2002 survey.

This was already apparent even as far back as the eighteenth century, when a theater ticket cost more than a full day's wages. As Baumol and Bowen (1968) indicated in their seminal study, the audience for high culture is dominated by highly educated individuals in high income brackets, an observation supported by the more recent data presented in Figure 13.1.

Although education appears to have a somewhat stronger effect than income, another hypothesis as to why the audience for live performances seems to become ever more exclusive was offered by Linder (1970), who noted that as economic growth increases our incomes and the available array of consumption goods, there is a tendency toward more "goods intensity" at the expense of time spent on cultural activities. Time to consume goods does not increase commensurately with the number of goods available. Attendance at live performances, of course, normally requires a relatively large allocation of time and often entails substantial expenditures on tickets and incidentals (Figure 13.2).

Trends in demand for the major performing arts categories may be inferred from the selected data of Table 13.1, and a timeline representation of significant events is presented in Figure 13.3.

## Commercial theater

*On and off Broadway.* Professional drama became an important entertainment medium during colonial times, although it was not until the nineteenth century that theater organized into a stock system of local resident companies permanently engaged at particular locations. However, not long thereafter, accomplished performers began to form touring companies, which, by the late 1800s, had mostly replaced resident stock companies.

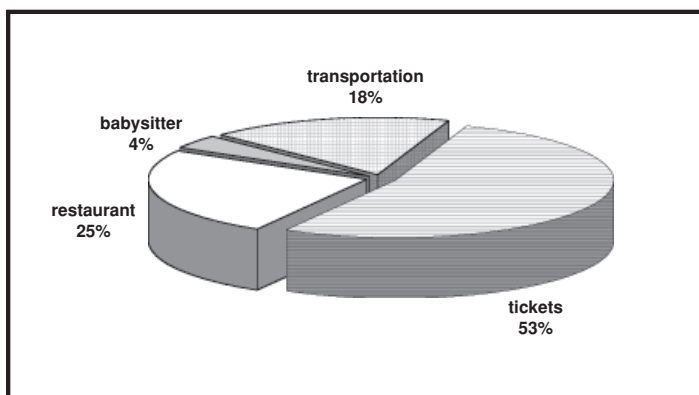


Figure 13.2. Cost of going out: ticket expense and associated costs of attendance at live performances for New York City (percentage distribution of total expenses by type).

Source: William J. Baumol and William G. Bowen, *Performing Arts: The Economic Dilemma*. A Twentieth Century Fund Study, © 1966, Twentieth Century Fund, New York.

By the early 1900s, **syndicates** owning chains of theaters and controlling bookings and fees had become dominant. The famous Shubert chain, for example, was formed during this period. But this was largely a transitional phase, as commercial theater further evolved into the current structure, wherein producers select a play, raise funds, and hire a director and cast, and with theater owners generally handling box-office personnel and stagehands, advertising and sales functions, and sometimes musicians. As Poggi (1968, p. xv) has noted:

Like so many of our social and economic institutions, the commercial theater has become **highly centralized**. . . . At the beginning of the century there were usually 250 to 300 productions touring the country at the height of each season; now there are about 20. In the late 1920s there were usually more than 250 productions opening on Broadway in a single season; now there would seldom be more than 60.

Still, however, it is Broadway – essentially the theater district in New York City – that attracts a significant portion of commercial theater receipts in the United States, that defines an industry, and that is of greatest historical significance.<sup>2</sup> **Broadway attendance (an estimated 45% to 50% coming from tourists) and ticket-price trends are illustrated in Figure 13.4a, from which it can be seen that the number of tickets sold (demand) only recently rose above the peak of the 1970s.<sup>3</sup> The lines in Figure 13.4b representing the number of play-weeks (plays times weeks of run) in each season meanwhile provide an approximation of the supply of performances available. In economic downturns, for instance, the number of play-weeks will generally decline.<sup>4</sup>**

In addition, it can be seen from **Figure 13.4c that gross receipts from commercial theater presentations on the road have at times overshadowed gross receipts on Broadway.** This shift in economic balance has also led to the

**Table 13.1. Selected data for U.S. legitimate theater, opera companies, and symphony orchestras, 1980–2010 (receipts and expenditures in millions of dollars; for season ending in year shown, except as indicated)**

Item	1980	1990	2000	2010
<i>Legitimate theater<sup>a</sup></i>				
Broadway shows				
New productions	67	35	37	39
Playing weeks <sup>b,c</sup>	1,541	1,070	1,484	1,588
Number of tickets sold (millions)	9.38	8.04	11.94	12.53
Gross box-office receipts (millions)	143	283	666	1,081
Road shows				
Number of tickets sold (millions)		11.1	11.7	14.5
Playing weeks <sup>c</sup>	1,351	944	771	1,003
Gross box-office receipts	181	367	572	803
<i>Opera companies<sup>d</sup></i>				
Number of companies	79	98	98	84
Expenses <sup>e</sup>	122.4	321.2	636.7	816
Performances <sup>f</sup>	1,312	2,336	2,153	1,877
Total attendance (millions) <sup>g,h</sup>	5.5	7.5	6.7	6.7
Main season attendance (millions) <sup>f,h</sup>	NA <sup>i</sup>	4.1	3.8	2.9
<i>Symphony orchestras<sup>i</sup></i>				
Concerts	NA	18,931	33,154	32,813
Attendance (millions)	NA	24.7	31.7	25.4
Gross revenue (millions)	NA	378	734	969

<sup>a</sup> Source: *Variety*, various June issues.

<sup>b</sup> All shows (new productions and holdovers from previous seasons).

<sup>c</sup> Eight performances constitute one playing week.

<sup>d</sup> Source: *OPERA America*, Washington, DC.

<sup>e</sup> U.S. companies.

<sup>f</sup> Prior to 1993, U.S. and Canadian companies; beginning in 1993, U.S. companies only. See also operabase.com for international data.

<sup>g</sup> Includes educational performances, outreach, etc.

<sup>h</sup> For paid performances.

<sup>i</sup> Source: *American Symphony Orchestra League, Inc.*, Washington, DC. For years ending August 31. Data represent all U.S. orchestras, excluding college/university and youth orchestras.

<sup>j</sup> NA = not available.

development of publicly owned companies that specialize in the production and staging of off-Broadway performances. As shown in Table 13.2, returns on investment in a major musical production can be relatively high and long-lasting, even in comparison with potential returns on popular films.<sup>5</sup> Table 13.3 presents Broadway's ten longest-running shows.

In recent years, musical reproductions (touring versions of current or former Broadway hits) or restorations (adaptations of past Broadway hits)

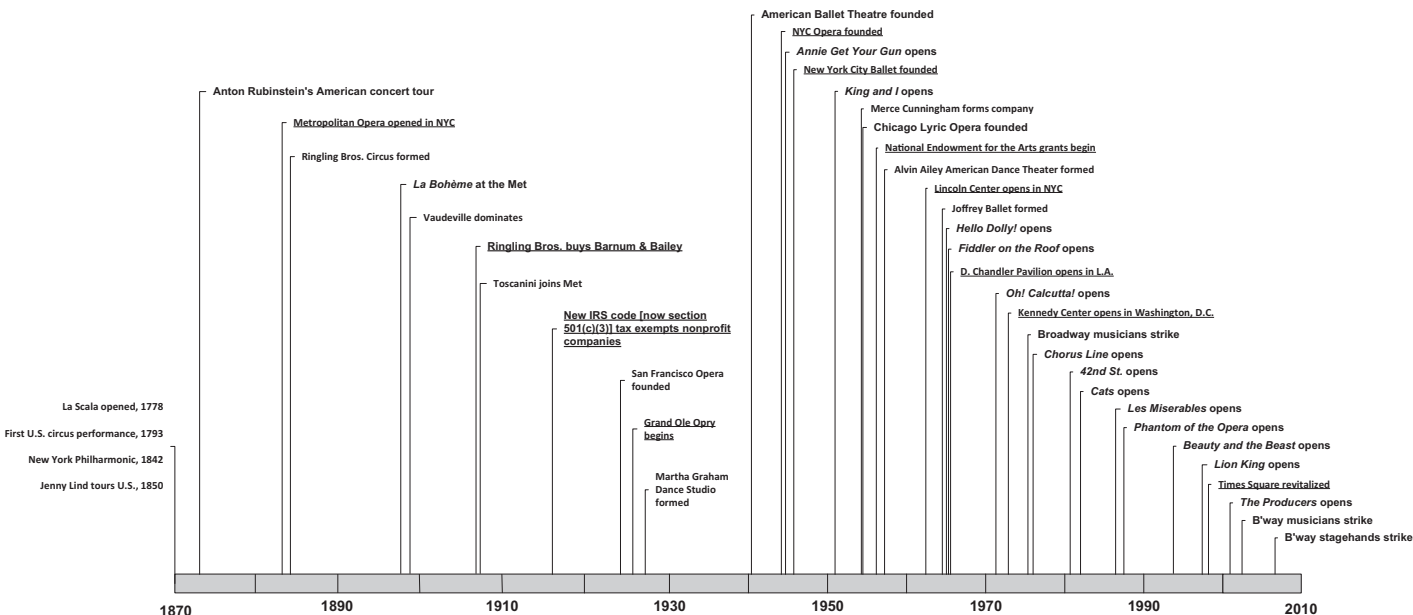
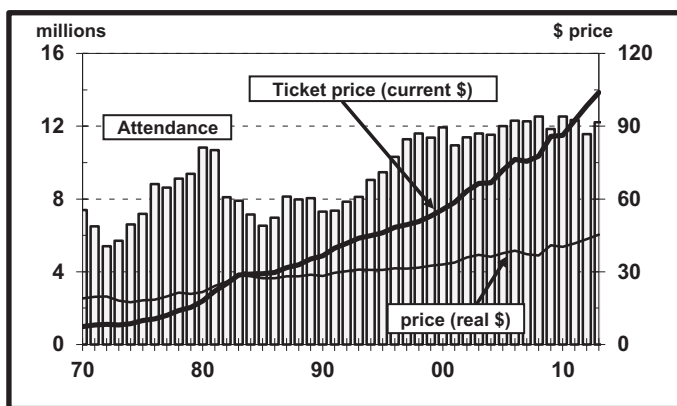
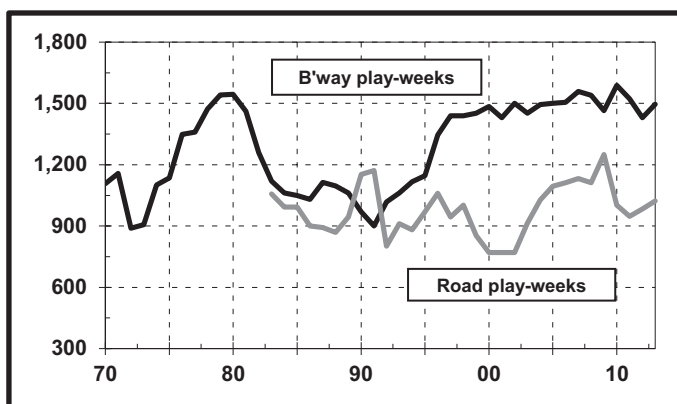


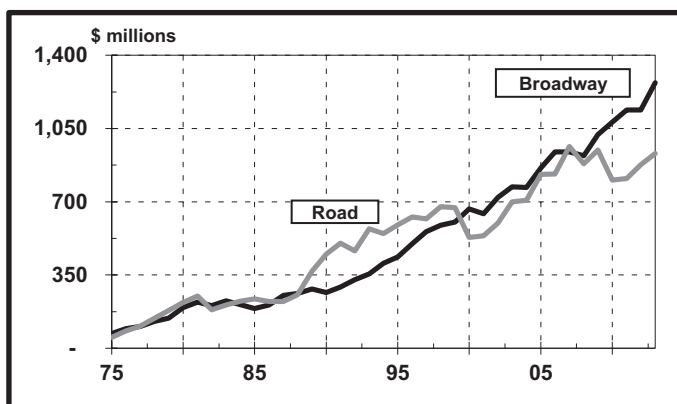
Figure 13.3. Milestones in the performing arts, 1878–2013.



(a)



(b)



(c)

**Figure 13.4.** Broadway theater trends: (a) prices and ticket sales, (b) play-weeks, and (c) gross sales on Broadway versus the Road, 1970–2013 seasons. *Source data:* *Variety* and League of American Theatres and Producers ([www.BroadwayLeague.com](http://www.BroadwayLeague.com)).

**Table 13.2.** *Characteristics of a major hit musical versus a major hit movie*

	Musical: <i>Phantom of the Opera</i>	Motion picture: <i>Jurassic Park</i>
Global box office	\$2.5 billion	\$913 million
Average production and premarketing cost	\$9 million	\$70 million
Length of run	20+ years	20 weeks

have accounted for more than 80% of total commercial theater ticket sales. And many successful Broadway shows have also set up for long runs off-Broadway – thereby significantly changing the economics of Broadway production financing and touring.<sup>6</sup>

The commercial theater segment also competes with, as well as benefits from, the existence of permanent nonprofit theaters (sometimes called regional or repertory theaters), which are resident in communities around the country. These resident theaters, supported by a combination of subscription fees, foundation grants, individual contributions, and ticket and merchandise sales, present a variety of plays (including the classics and those of Broadway and off-Broadway) and have sometimes been the source of new productions that later move on to commercial success and/or are adapted by Hollywood filmmakers. Such theaters attempt to preserve, develop, and extend the availability of performing arts productions and have become substantial enterprises.<sup>7</sup>

*Circus.* According to Murray (1956, p. 26), elements of the circus, which included performances by equilibrists and prestidigitators, had already begun to emerge in Egypt as early as 2500 BC. And the circus has subsequently

**Table 13.3.** *Top ten longest-running Broadway productions as of 2014*

Show	Designation	Opening Season	No. of performances
<i>Phantom of the Opera</i> <sup>a</sup>	Musical	1987–8	10,951
<i>Cats</i>	Musical	1982–3	7,485
<i>Chicago</i> <sup>a</sup>	Music-Rev.	1996–7	7,277
<i>The Lion King</i> <sup>a</sup>	Musical	1997–8	6,870
<i>Les Misérables</i>	Musical	1986–7	6,680
<i>A Chorus Line</i>	Musical	1975–6	6,137
<i>Oh, Calcutta!</i>	Music-Rev.	1976–7	5,959
<i>Beauty and the Beast</i>	Musical	1993–4	5,461
<i>Mama Mia!</i> <sup>a</sup>	Musical	2001–2	5,215
<i>Rent</i>	Musical	1995–6	5,123

<sup>a</sup> Still running or revival.

Sources: League of American Theatres and Producers, LiveBroadway.com.

flourished in many different times and places. The modern era of the circus ring with a horseback trick rider began in England in 1768 and America in 1785 (Culhane 1990, p. 2). At first, small traveling shows, including fiddlers, jugglers, and acrobats, moved from city to city in covered-wagon caravans. Later, circuses staged permanently based performances, which led eventually to the American development of huge multiring spectacles.

Today, however, the circus is generally considered to be one of the major performing arts in Europe, but not in the United States – where companies are not government-subsidized and are instead operated by private for-profit organizations. As such, circus companies seem to be best categorized as a permanent traveling form of commercial theater operating with a blend of the economic features seen in both theater and theme-park operations.

Of the approximately ten major domestic circuses, few are believed to be more than marginally profitable, even though annual American attendance at circus performances exceeded 20 million in the early 2000s. The problem in the circus, as in several of the other performing arts, is that cost efficiencies are difficult to attain given the size and structure of the spectacle that must be assembled and then disassembled every few days or weeks.<sup>8</sup>

## Orchestras

The history of orchestras also extends back to colonial times, but it was not until the founding of the New York Philharmonic in 1842 that formal organizations proliferated. In the early years, orchestras relied on a few wealthy patrons for support: J. P. Morgan, Andrew Carnegie, and Joseph Pulitzer were important contributors to the New York Philharmonic; Henry Higginson was the guarantor of the Boston Symphony.

Today, the approximately 1,600 orchestras in the United States are categorized by the American Symphony Orchestra League according to the size of their budgets. Such major orchestras as those in Boston, Chicago, Cleveland, Los Angeles, New York, and Philadelphia naturally attract the bulk of expenditures at concerts staged by professional groups.

## Opera

Opera is drama set to music, and the development of opera has closely followed that of drama. The roots of opera can be traced to ancient Greek theater presentations and to the religious plays of the Middle Ages, which illustrated biblical stories with action and music. However, it was not until the 1600s that opera evolved into a distinctive form using complicated plots and more varied orchestral arrangements. This form flourished in Europe over the next 200 years.

In the United States, opera seemingly came of age in 1883 with the organization in New York City of what was to become known as the Metropolitan Opera Company. However, as a reflection of the complexity and cost of



staging grand opera, there are currently three major opera companies in the country: the Metropolitan (2013 budget of \$327 million), the San Francisco Opera (2012 budget of \$69 million), and the Chicago Lyric Opera (2014 budget of \$68 million). Companies in Los Angeles and Houston have also recently become more prominent.

The economic problem inherent in opera is that when all lead and supporting singers, chorus, dancers, orchestra, conductor, and extras are included, there are 200 or more professionals on a payroll sustained by, at most, 4,000 seats per performance. At the Met, for instance, labor costs in 2013 accounted for two-thirds of expenses.<sup>9</sup> It is thus understandable that even some fairly large cities do not have permanent grand-opera companies.

## Dance

Little of professional ballet, a European art form, was seen in the United States before World War II. And not until the 1960s did significant philanthropic grants begin to support it. Major professional dance companies now include the New York City Ballet, the San Francisco Ballet, and the American Ballet Theatre. Ballet has become one of the most internationally integrated art forms.

Modern dance, in contrast, has an essentially American flavor. There are now at least half a dozen important modern dance groups, most of which are dependent on a single choreographer and small groups of financial benefactors.

### 13.2 Funding sources and the economic dilemma

The core of the economic dilemma of the performing arts, as originally outlined by Baumol and Bowen (1968), is that it is virtually impossible to raise the productivity of live performances. It takes as long to play a Brahms concerto today as it did 100 years ago, and a scene by Shakespeare requires the same acting time it did 350 years ago. Meanwhile, over the long run, productivity (output per person-hour) has steadily grown in nearly every other segment of the economy. As it happens, a live performance is unique in that it is itself an end product and is consumed at the point of production.

This economic dilemma – the productivity lag in the arts – becomes ever more pronounced as productivity in other sectors increases, as real-income growth makes society more goods-intensive, as operating costs rise in line with overall inflation, and as ticket prices rise relatively rapidly in an attempt to cover “income gaps.”<sup>10</sup> Such gaps, of course, tend also to narrow the financially feasible range of artistic presentations, favoring those plays, operas, ballets, and concerts that require fewer performers and/or that require less rehearsal time.

Empirical studies suggest that ticket prices for live performances have risen at rates consistently higher than that for the Consumer Price Index. And studies such as Baumol and Bowen's confirm that, all other things equal, higher ticket prices reduce the quantity demanded, especially from less well-to-do and younger segments of the population. In periods of economic recession, even upper-income consumers may reduce spending in this area.

Nonetheless, few educated people would argue that live performing arts should be allowed to wither. From a purely practical viewpoint, traditional theater, opera, and dance provide a training ground for performers in the mass-entertainment media. Also, these training grounds undeniably enrich the surrounding society, making it more interesting, more spiritually invigorating, and more "human."

Still, in a world chronically mired in a crisis of budgets, a significant problem in the funding of a broadly diversified range of cultural activities remains. The solution to the problem, both in the United States and abroad, has been to fund through philanthropy and subsidy.<sup>11</sup> That's because, over a long period, the amount of total operating income directly derived from government sources in the United States is generally no more than 10% to 15%, whereas ticket income ranges from 30% to 50%.

As would be expected, the likelihood of regular contributions to the arts rises substantially with income and contributions by individuals and estates are estimated to be the largest single source of voluntary funding; combined contributions from corporations and foundations account for only 10% or so of all private philanthropic support. Major orchestras and operas meanwhile appear to receive proportionately more regular contributions than theater or dance.<sup>12</sup>

Performing and visual arts are further subsidized by government funding through state and local arts councils and through federal participation in matching-grant programs of the National Endowment for the Arts (Table 13.4). The federal tax exemption for nonprofit organizations under Internal Revenue Service code Section 501(c)(3) also helps. Yet national-government support has a much longer and deeper tradition in Europe than in the United States, where emphasis has often been on construction of cultural centers tied to urban-renewal projects rather than on reduction of operating deficits. It is thus evident that the arts require support from a diverse set of benefactors.

Although it can be argued that, on purely economic grounds, taxpayers' financial support for money-losing arts programs enjoyed by an elite few is a waste of resources better spent elsewhere, justification of some government subsidy is usually made under the following assumptions:

Support for the arts opens opportunities for development of talented individuals from nonaffluent backgrounds.

Table 13.4. *Financial support for the arts from the NEA, 1970–2013*  
(millions of dollars)<sup>a</sup>

Type of fund and program	1970	1980	1990	2000	2013
Funds available <sup>b</sup>	15.7	188.1	170.8	97.6	154.2
Program appropriation	6.3	97.0	152.3	79.6	109.1
Grants awarded (number)	556	5,505	4,252	1,487	2,152
Funds obligated	12.9	166.4	141.0	100.0	113.9

<sup>a</sup> For years ending June 30 in 1970 and 1995; other fiscal years ending September 30.

<sup>b</sup> Includes other funds, not shown separately. Excludes administrative funds. Gifts are included through 1980 and excluded thereafter.

Source: NEA, [www.arts.gov](http://www.arts.gov), NEA annual reports.

Support has educational benefits, exposing young people to cultural activities that they might not otherwise encounter.

Support encourages artistic innovation, which is a source of economic growth.

Arts are public goods that, when provided to individuals, automatically become available to, and are of collective benefit to, other members of the community.

In this respect, arts are thus goods with both public and private characteristics and, like education, most economists believe that they can justifiably be supported by a combination of public and private contributions.<sup>13</sup>

But there is more. For private corporations, support of cultural activities often stimulates local commercial activity and provides new business opportunities that have positive-feedback effects on prospects for employment and for profits. The arts and creative sectors also can be viewed (as in Potts, 2011) as valuable contributors to economic growth and innovation with respect to the ways that people live, work, and interact with each other and with new devices. For individuals, especially in North America, purely aesthetic pleasures are often further complemented by substantial tax benefits. And for the society as a whole, there are, as noted by Frey and Pommerehne (1989, p. 19), the following positive externalities:

- An *option value* of having a supply of culture even if an individual does not currently use the supply
- A *bequest value* for future generations unable to express preferences on currently existing markets
- An *existence value* such as for historic landmark buildings, which, once destroyed, cannot be rebuilt
- A *prestige value*, even for those who are not at all interested in art.<sup>14</sup>

### 13.3 The play's the thing

#### Production financing and participations

Financial support for the arts, whether from public or private sources, is normally dedicated to the development of specific facilities or to the patronage of fixed dance, orchestral, and opera groups. Usually, no direct financial return on investment is expected. But when it comes to funding theater, the motives for sponsorship are often much more speculative and entrepreneurial than in any of the other arts. In fact, the financing and development process for new commercial-theater productions most closely resembles that used for films.

To start, a producer normally acquires, through the signing of an option contract, the rights to a play or other literary property that is to be adapted for the stage.<sup>15</sup> Such contracts will usually provide for an advance against future royalties and will apply to the interim period in which all the artistic and financial elements ultimately needed to mount a stage production are to be assembled.<sup>16</sup>

Once an option is acquired, a producer then sometimes seeks financing by approaching prospective individual investors, known as *angels*. Angels must indeed love theater, because tax sheltering is much more effective in oil, real estate, and professional sports franchises than on Broadway, where opportunities for depreciation are limited.<sup>17</sup> Angels must thus also have enough income to afford a tax loss (write-off) because, historically, the odds against ever seeing a return on investment are much greater than two to one. An estimated 80% of shows never fully recover their costs, and only 18 Broadway shows have ever run for more than 7 years.<sup>18</sup>

Given the high costs of today's productions (in 2014, \$3.5 million for a play, \$22 million for a major musical), a run on Broadway is increasingly likely to be funded by a large entertainment company rather than by a group of individual investors contributing relatively small amounts to the total. The large companies can more readily afford the risk and will often use the Broadway run as a means of establishing a project for possible use in other media, or in other locations, without requiring that a show turn an immediate profit.<sup>19</sup> The opportunities now include overseas markets, which can return multiples of what is earned domestically.<sup>20</sup>

Although financing is occasionally in the form of a sale of stock in a corporation organized for production of a play, it may further be in the form of a large development investment that is granted by film studios in return for eventual, and perhaps strategically valuable, movie rights. Broadway's major theater owners (essentially the Shubert Organization, the Nederlander Organization, and Jujamcyn Theaters) might also take a piece of the action and function as producers.<sup>21</sup> More typically, though, an offering prospectus describing anticipated running and start-up costs of a show is circulated to interested individual investors.<sup>22</sup>

**Table 13.5. Typical financial participations in theater productions**

<b>Gross participation (%)</b>	
Playwright	10
Lead performer	5
Director	2
Theater manager	25
<b>Profit participation (%)</b>	
Playwright	5–10
Director	5
Lead performer	5–10
Other performers and show manager	10
Producer	15
Investors	50–60

Other investors might include the play's director, its leading performer or performers, and individual theater owners (Table 13.5). Directors and lead performers will usually receive a small percentage (e.g., 5%) of the play's earnings in addition to a salary or fee, whereas theater owners may (depending on season, theater quality, and the producer's reputation) receive 20% to 30% of the box-office gross. However, as noted by Baumol and Bowen:

[T]he locus of control of a production is sharply divided between the producer and the owner of the theater in which the play is performed.

While the producer selects his play, controls the artistic standards of the production, raises the funds invested in it, hires the director and the cast, sets wages and decides on outlays on costumes and scenery, there are other matters which he normally does not control completely. A powerful producer can obtain a contract giving him a substantial voice in what may be termed the marketing of a play, but usually this is left largely in the hands of the theater owner, who often supplies, in addition to box office personnel and ushers, several stagehands and, where appropriate, several musicians. He bears part of the cost of advertising, consults in the setting of ticket prices, and supplies tickets to brokerage agencies. He has complete control of the box office, into which a producer may even be refused admittance. . . .

The theater owner normally receives a percentage of the weekly gross of a play so that, aside from the advantages of length of run, it is in his interest to house a successful play. Since the contract usually provides that he can eject a play from his theater when the weekly gross falls below a prespecified figure, it is alleged that box-office personnel have sometimes been instructed to refuse to sell tickets to potential patrons, stating that all the seats were already sold. (Baumol and Bowen 1968, pp. 20–1)

As in movie deals, variations from fairly standardized percentages are based on the relative bargaining power of the participants. A major star in a small play can receive weekly guarantees plus increasing percentages of gross after receipts reach certain levels. Directors may receive fairly large upfront fees

Table 13.6. *Budget estimates for a \$2 million Broadway stage production: an example, circa 2010<sup>a</sup>*

Scenery	\$120,000
Props	34,000
Costumes	60,000
Lighting and sound	80,000
Fees	200,000
Rehearsals	160,000
Advertising	520,000
Other costs	200,000
Total production costs	1,374,000
Pre-New York (rehearsals, hauling)	216,000
Bonds (AEA, IATSE, ATPAM, theater)	140,000
Reserve for contingency and preview losses	270,000
Total capitalization	\$2,000,000

and smaller percentages of weekly grosses. Playwrights normally earn at least a minimum author's royalty of 10% weekly (but 5% of weekly receipts for nonmusical productions off-Broadway).<sup>23</sup> And the show's general manager will receive a fee plus weekly salary and perhaps a small percentage of net profits, if any.<sup>24</sup>

### Operational characteristics

A private placement memorandum will estimate the weekly breakeven and weekly net profit at capacity for a show that is up and running. But even relatively modest productions require extensively detailed budgets and forecasts because of the many small items that will always collectively add up to significant amounts.

The estimates in Table 13.6 illustrate how each two million dollars of investment in a Broadway production might typically be apportioned, excluding any of the percentage of gross that might nowadays be paid for star performers.<sup>25</sup> As can be seen, advertising expenses constitute a major component of total running costs. In this example, the weekly breakeven, including all royalties, is approximately \$500,000 per week and, at capacity, weekly receipts and net profits were estimated at \$640,000 and \$140,000, respectively.

The high fixed costs of operation naturally create a large leveraged effect on profits and, also, a tendency to have either a bona fide hit with substantial profit potential or an outright failure. Usually, there is little likelihood of anything in between the extremes. But a theater's seating capacity is always an important factor in determining a show's success: A theater with too many empty seats will adversely affect audience mood and cost much more to rent,

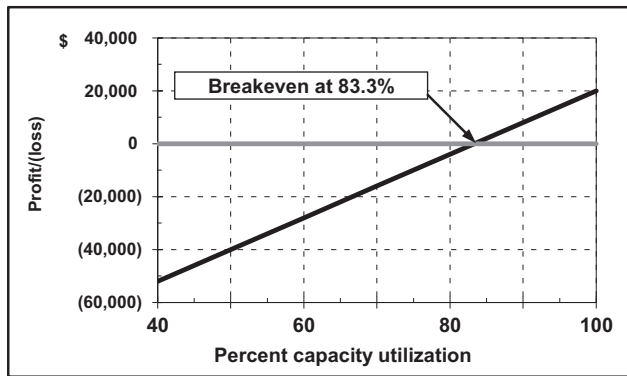


Figure 13.5. Breakeven capacity utilization: an illustration.

whereas a theater running a hit show with too few seats will not fulfill its profit potential.

To achieve the highest possible revenue, Broadway producers in particular have begun to implement the sophisticated yield management systems (i.e., dynamic pricing models) that are commonly used in hotel and airline industry operations. In such systems prices for any show and performance are variable and based on forecasts of capacity utilization that extrapolate long-range box-office trends that are then adjusted to account for (and to ultimately fill) the remaining empty seats as the date of the show approaches.<sup>26</sup>

The sensitivity of profits to changes in box-office receipts for a play with running costs of \$100,000 per week, an average ticket price of \$30, and seating of 500 is illustrated in Figure 13.5. Here it is assumed that the production does not garner additional revenues from cable television or movie-rights sales, or from any other such ancillary sources, and that royalties and other payments are not scaled (usually they are). If there are eight performances per week, then, under these conditions, breakeven requires an average capacity utilization of 83.3% (417 seats); figures consistently less than that level will cause losses to mount rapidly.<sup>27</sup> Yet levels of 70% or less are not unusual.<sup>28</sup>

In budgeting for a show, prospective investors should also have a solid grasp of labor union contract stipulations. Relationships with the Actors' Equity Association, the Dramatists' Guild (playwrights), the Society of Stage Directors and Choreographers, and the International Alliance of Theatrical Stage Employees may have important financial ramifications on performing arts productions.<sup>29</sup>

### 13.4 Art markets

Of all the areas that touch on cultural issues, the one that is continuously active and most economically visible and analyzable is related to trading in

objects or art. The history of such trading is long, the data copious, and the studies numerous.

An early market characterized by speculation, for example, appeared in China's Song (sometimes spelled Sung) Dynasty era of the eleventh through thirteenth centuries. It was a time of passion for artistic works such that there was a craze for the collection and study of antiquities. Similar speculative activities also appeared in Italy's Medici era of the fifteenth century. A flourishing art market, involving paintings, etchings, and engraved books, also emerged in seventeenth-century Flanders and Holland and eventually spread to most of Europe.<sup>30</sup>

Britain, France, and Italy became important trading centers in the eighteenth century, but by the early twentieth century, a significant amount of global activity had begun to shift to the United States.<sup>31</sup> Although New York and London have retained their dominance into the early 2000s, there is no doubt that Asian centers such as Hong Kong are gaining importance and have grown to account for at least one-third of global fine-art auction sales.<sup>32</sup> The annual global aggregate art market trade, including both dealer and auction sales of fine and decorative art and antiques, is estimated to have expanded to around \$65 billion in 2014.<sup>33</sup>

This figure, however, is only a rough estimate that includes private dealer and auction sales, and it represents not a homogeneous aggregate but instead a collection of distinct and independently evolving submarkets that includes contemporary paintings and sculptures, antiques, crafted products, and historical works and genres. As in other sectors, a power law functions, with the bulk of the market's trading value being accounted for and handled, respectively, by relatively few items and dealers.

The peculiar characteristic of the art market is that, as in the market for financial assets, rising prices do not normally much deter demand in the way that rising prices do for food, fuel, or clothing. This feature was recognized early by Veblen (1899), who (see Chapter 1) held to a theory of "conspicuous consumption" by the wealthy. In Veblen's view, the purchase of luxury goods at visibly high prices is used by the wealthy as an indicator of social status. Scarcity is also a factor, however, because the supply of many *objets d'art* is limited to what the artist can produce during a lifetime. In a more populous world, after all, there are now only so many authentic Picassos to be had.

Another unusual feature is that transfer prices in the primary and illiquid market for new and unknown artists are typically less than those in the secondary market, because purchases of primary, less seasoned, creations are riskier than those of products that have been proven over time in terms of rarity, quality, notoriety, or historical importance. For such works, the passage of time results in price appreciation rather than depreciation – the usual price path for most mechanical or electronic products. Prices for contemporary works are also normally the most volatile.

A third important characteristic is that, unlike the situation in many other markets, each work of original art is unique and with few or no close



substitutes. There is thus a greater amount of subjectivity involved in valuation of art than in valuation of financial assets such as stocks and bonds.<sup>34</sup>

The range of participants in trading is broad and includes individual collectors, corporations and private institutions, galleries, museums, libraries, and dealers. In addition to the intrinsic aesthetic enjoyment that such participants derive from ownership and display, the art is also understood to be a capital asset that will over time function as a store of value and as a potential source of capital gains that are tied to aspects of uniqueness and durability. As such, these items are luxury goods because there is a high income elasticity of demand for them (i.e., higher income results in proportionately more demand).<sup>35</sup>

Although art transaction price indexes have been devised for the purposes of tracking and comparing art investment performance characteristics against those of other asset classes, the entire exercise is fraught with difficulty because evaluation normally involves much more subjectivity and fewer comparable item transfers than in most other asset classes.<sup>36</sup>

### 13.5 Economist echoes

Although the basic literature is still early in development, the creative and cultural sectors are increasingly being viewed as forces essential for innovation and economic evolution.<sup>37</sup> Work on the theoretical statistical behavior of the film business, described in Section 4.5, also fits nicely here, where an overall economic perspective may be gained through consideration of a few important concepts, organizational features, elasticities, price discrimination strategies, and externalities.

#### Organizational features

As Caves (2000, p. 2) indicates, several “bedrock properties” are commonly seen in the types of contracts and business structures that have evolved in the production, distribution, and marketing of entertainment and culture-related goods and services. The basic economic properties (with Caves’s designation in italics) of creative activities are as follows:

- Demand is highly uncertain in the sense that no one knows in advance how consumers will value new products and services (*nobody knows*).
- Creative workers, unlike those in jobs that are primarily functional and standardized, care greatly about what they produce (*art for art’s sake*).
- Many creative ventures (e.g., Broadway musicals or films) require diverse skills and specialized workers with unpredictable vertically differentiated skills (*motley crew*).
- Creative products (and also artists) are usually differentiated both vertically (product A is better than product B) and horizontally (product A and

product B are similar in character and quality but not identical) (*A list/B list*).

- Most creative products (e.g., paintings) can differ in many ways through small differences (*infinite variety*).
- With time being of the essence in the creation of many properties (e.g., movies and concerts), close temporal coordination by all contributing elements is required (*time flies*).
- Royalties and rent payments are often collected in small lump-sum payments stretched over long periods of time (*ars longa*).

These common aspects help explain, for example, why the few large movie studios have a need for the services of so many small, independent creative companies and why cultural and performing arts segments use the types of contracts and ownership structures that they do. Option contract forms prevail in creative industries because many of the costs often incurred are fixed but also sunk (irrecoverable) at various well-defined stages of production.<sup>38</sup>

The concept of cultural capital, introduced by Throsby (2001, p. 46), provides further perspective from which to view the organizational features of creative industries. Such capital exists in both tangible (e.g., buildings, paintings, sculptures) and intangible forms (e.g., ideas, beliefs, practices, values), which give rise to a flow of cultural services.<sup>39</sup>

## Elasticities

As Heilbrun and Gray (2001, p. 102) have noted, “most studies have shown the demand for attendance at the live performing arts to be price-inelastic.” What this means is that consumers of such services are not especially sensitive to changes in price: A rise in price does not cause a proportionate decline in demand as measured by number of tickets sold per unit time.<sup>40</sup>

But empirical studies suggest that *income* elasticities with regard to the demand for performing arts cluster around 1.0.<sup>41</sup> It seems that, as incomes rise, the greater opportunity cost of time spent on cultural activities may offset the pure positive income effect that derives from higher purchasing power. Over the longer term, this further implies that overall demand for the performing arts and for cultural events will probably grow at about the same rate as that of the domestic economy.

## Price discrimination

Nevertheless, existing differences in elasticity of demand among potential members of an audience might still be exploited by a discriminating monopolist – which would be an economist’s way of describing the producer of a specific performance or event. In such instances, a price discrimination strategy – wherein different parts of the audience can be charged different prices (see Chapter 1) – might be implemented so as to maximize the

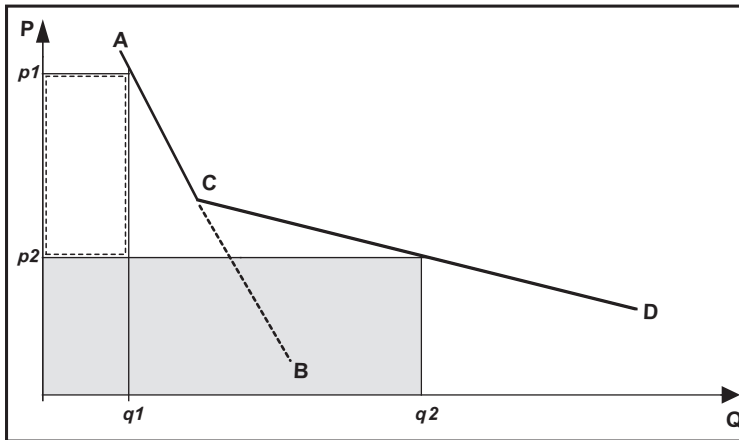


Figure 13.6. Price discrimination and the consumer surplus.

monopolist's income.<sup>42</sup> The producer would thereby extract what is known as the **consumer surplus**: the price difference between what consumers actually pay and what they would be willing to pay.

This is illustrated in Figure 13.6 (and in Figure 1.9c), where the quantity of theater seats sold to business guests is  $q_1$  and that sold to tourists with discount tickets is  $q_2$ . The theater's total revenue is  $p_2q_2 + (p_1 - p_2)q_1$ . Selling all seats at the lower price of  $p_2$  would provide revenues of  $p_2q_2$ , and selling all at  $p_1$  would make  $p_1q_1$ . Price discrimination raises the total above what would likely be received by setting a single selling price.<sup>43</sup>

### Externalities

According to economic theory, and as noted by Hendon, Shanahan, and MacDonald (1980, p. 21), "art goods themselves are not public goods. . . . [A] necessary but not sufficient condition for a pure public good is that it can be jointly consumed perfectly. The exclusion principle says that a product, though jointly consumed, can be provided in separable units to various consumers. Because admission to an artistic event (or right to use) can be provided in separable units, the exclusion principle is operable in the arts." But, in addition, "the more definitive externalities generated by the arts usually flow to special-interest groups."<sup>44</sup>

### About cultural economics

Cultural economics has for the most part been dominated by a static equilibrium perspective based largely on neoclassical and Keynesian notions that assume a predetermined set of resources, technologies, preferences, and opportunities. However, more recent work (as summarized and extended in

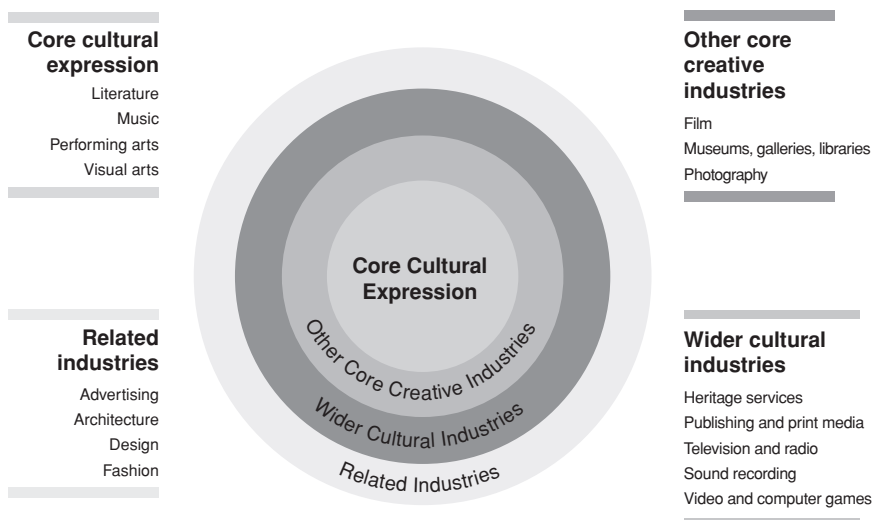


Figure 13.7. Source: *Creative Economy Report*, 2013 Special Edition, UNESCO, United Nations Development Program, p. 22. Available at: <http://www.unesco.org/culture/pdf/creative-economy-report-2013.pdf>.

Potts, 2011) provides a contrasting approach (creative industry economics) that is dynamic, complex, and market-based. In this view, the broadly defined system is open to novelty, experimentation, and innovation. Unlike the traditional cultural economists, creative industry economists are not fixated on the preservation, heritage, subsidization, market failure, and distributional issues that are central to the closed-system existential thinking of cultural economists.

Cultural economists also do not typically investigate and propose market-based structures that go beyond recommendations in support of nationalistic government-sponsored cultural policy initiatives, subsidized incentives, and formal programs. But in the alternative market-based creative industry approach, “[T]he wealth of commerce feeds art, and the wealth of art feeds commerce. Culture and economy co-evolve.”<sup>45</sup> And elite experts are not the final arbiters of taste.

The way in which all of this relates to various media and entertainment segments is concisely illustrated in UNESCO’s concentric circle model shown in Figure 13.7. UNESCO has been instrumental in establishing cultural segment definitions that are now used around the world.

### 13.6 Concluding remarks

Performing arts organizations seem always to live at the edge of a financial precipice. This condition is, of course, a function of live-audience size limitations, the great expense of coordinating an effective production, and

the perpetually high cost of money for risky ventures.<sup>46</sup> Live performances are also economically inefficient because, unlike manufactured goods, performances are “consumed” at the point of production. Performing arts are, in the end, “a business of transients: writers, performers, designers, actors, directors, theater owners, and producers.”<sup>47</sup>

From the traditional economist’s view, the most important and ineluctable element is that productivity in the performing arts is not easily raised: On the programming-cost side, an hour of performance still takes an hour, whether it is done before a camera for distribution on television or cable or in front of a live audience.<sup>48</sup> Nevertheless, it is now recognized that the arts and culture sectors are – aside from aesthetic and bequest considerations – in and of themselves valuable contributors to overall economic innovation, evolution, and growth.

Financing of the arts is also being further supported by new media-revenue sources. The flow of story lines often goes from Broadway (and/or the London stage) to Hollywood and back again, each being reinforced and reinvigorated by the other.<sup>49</sup> Backers of commercial-theater productions may look increasingly to cable-television license fees or other video presentation formats to enhance profits and to reduce the risk of loss. It also seems likely that the convenience and relatively low cost of home viewing options will encourage more frequent sampling by people who would not otherwise have an interest in seeing such events. Through technological advances, more people are able to enjoy more performances than ever before.<sup>50</sup> And analytical data on the creative sector are also now better organized and available in greater depth than ever before.<sup>51</sup>

Cultural achievements reflect the discipline, devotion, and intelligence of individuals and also the most basic values of the society. That is why, for example, the free expression inherent in two distinctly American art forms, jazz and modern dance, could not have developed or thrived in authoritarian environments.

In all, the arts and culture sectors are being increasingly recognized as essential to innovations and changes that feed back favorably on the overall economy.<sup>52</sup>

## Notes

1. This paraphrases material from a commentary about the nature of the arts distributed privately to members of MCORE in New York City by Ray Evans Harrell, an expert music coach.
2. As Figure 13.4c shows, until 1989, stage productions garnered most of their dollars on Broadway – legally defined as a production in the Broadway District of New York City in a theater seating more than 499 persons. In contrast, “off-Broadway” is defined as a New York City production in a theater seating no more than 499 and no fewer than 99. However, as Pogrebin (1999) suggests, Broadway is no longer the domain of the stage play.
3. In looking at this, Baumol and Baumol (1984) noted that, over the 50 years following the Great Depression, top Broadway prices rose about 14-fold, while movie-ticket prices

rose 35-fold. Admission trends for less expensive off-Broadway performances are probably quite similar, but data on this are not reliable. Cowen (1996) and Potts (2011), however, dispute the cost-disease analysis. Healy (2011c) writes of how Broadway productions have more recently begun to use the same yield management or dynamic pricing strategies common in the airline and hotel industries to enhance revenue generation. Maloney (2012a) discusses the same for the Met. See also Disch (1991) and note 27, this chapter.

4. See Hofler (2009b).

5. Hughes (2005a) notes that the cost of launching a Broadway musical was about \$8 million to \$9 million in 2005 and that Broadway now uses road shows as a way to recoup costs in the same way that the movie industry uses DVD revenues. However, as noted by Leonhardt (2006a), road shows have encountered different problems.

6. For example, Healy (2011f) illustrates with a comparison of Broadway versus off-Broadway data for the show *Avenue Q* as follows:

	Broadway	Off-Broadway
Capitalization cost	\$3.5 million	\$800,000
Weekly running costs	\$300,000	\$96,000
Marketing/advertising costs	\$4 million	\$700,000
Time to recoup	42 weeks	13 weeks
Seats to sell per performance	796	492

As recounted in Green (2005), Las Vegas profit numbers may also be substantially more than Broadway's. An 1,800-seat Vegas showroom playing ten shows a week for 48 weeks at 85% capacity and \$100 a ticket takes in \$73 million, which is several times what a 300-seat Broadway theater can generate.

7. The following table profiles the not-for-profit theater segment (2012):

Number of theaters	1,782
Attendance	36.7 million
Subscribers	1.57 million
Performances	211,000
Productions	18,500
Revenues (earned income)	\$1,058 million
Contributions	\$968 million
Total income	\$2,026 million
Expenses	\$1,986 million
Earned dollars as % of total income	52%
Contributed dollars as % of total income	48%

Source: Theatre Communications Group, *Theatre Facts 2012* (www.tcg.org).

Musical rights for community theaters are mostly controlled by four companies: Music Theatre International, Rodgers & Hammerstein Theatre Library, Tams Witmark Music Library Inc., and Samuel French Inc. These firms, which already own more than 500 scripts and scores, purchase licensing rights to Broadway shows, typically offer authors guarantees and advances against royalties (ranging between \$25,000 and \$2 million), and charge local theaters up to 15% of their box-office take. See Reich (1996) and Healy (2014c) on ticket prices at nonprofits.

**8.** According to Hirsch (1987), in 1987 Ringling played before 11 million people in 89 cities at ticket prices ranging from \$6.00 to \$11.50. Revenues in 1987 were \$250 million, but according to Gilpin (1993) revenues were probably twice as much by 1993. Collins (2009) cites a 2008 revenue total of more than \$600 million including all the company's activities, with profits in the range of \$50 million to \$60 million. Labor costs are 50% of budget; ads and promotion consume another 25%; and train costs, arena rentals, props, and equipment and insurance expenses absorb the remainder of the budget.

Most circuses cover their costs at the gate and make profits with concessions. A review of the RB&BB history at age 100 appears in *Variety*, January 11, 1984, with a follow-up appearing in *Variety*, July 24, 1995. See also *Time*, May 4, 1970, *Amusement Business*, August 15, 1970, and *Advertising Age*, December 12, 1983. Other recent touring groups include The Big Apple Circus, The Carson & Barnes Circus, the Clyde Beatty–Cole Bros. Circus, the Pickle Family Circus, the Culpepper & Merriweather Great Combined Circus, the Royal Hanneford Circus, and the Canadian Cirque du Soleil. Cirque, along with its permanent venues (e.g., Las Vegas), is now the other major company, nearly on a par with Ringling, generating more than \$500 million of revenues (compared with Ringling's estimated \$600 million) in 2005. See G. Collins (2005) and Pogrebin (2001).

**9.** Cooper (2014), for instance, writes that the Met's 2014 production of Puccini's *La Bohème* "employs seven principal singers, 80 chorus members, 35 children, 72 musicians in the pit, 12 musicians in a stage band, 106 nonsinging supernumeraries and a horse and donkey." The Met in 2013 covered around half of expenses from contributions, one-quarter with box office income, and the remainder from media simulcast income and other sources. See also Maloney (2014) and Nagourney (2014). The Met receives minimal government financing, whereas the Paris Opera has around half of its \$263 million budget covered by the government.

**10.** As Heilbrun and Gray (2001; 1993, p. 133) note, the rising real incomes that are derived from rising productivity in the overall economy make higher ticket prices more affordable for more people. Also, Cowen (1998, p. 21) views technological progress as having had an important positive effect on productivity in the arts (e.g., French impressionists benefited from new paints made possible by advances in chemistry). As Cowen (1996) explains, reproduction technology has improved to the extent that even "if the number of musical performances does not rise, the quantity of performance output, measured in consumption units, has skyrocketed. . . . [C]onsumers are receiving musical services nonetheless. . . . The growing diversity of musical composition and performance represents a vast productivity increase." See also Pogrebin (2011).

**11.** Characteristics of various funding sources appear in Balfe (1993).

**12.** However, some private-institution grants (from foundations, corporations, and labor unions) are regularly directed toward specific support of other organizations and projects, including those in museums, music, architecture, and literature. Note also that, in recent years, symphony orchestras and theater, opera, and dance companies have steadily derived approximately 55% to 60% of their total revenues from earned income, whereas private support and public funding have accounted for roughly 35% to 40% and 5% to 10%, respectively, of revenues.

**13.** These and several additional assumptions used to argue for support of the arts have been challenged by Grampp (1989, pp. 233–69), who believes that art should support itself.

**14.** Throsby (2001, p. 28) follows a similar line in noting that there are aesthetic, spiritual, social, historic, symbolic, and authenticity values for works of art as well as buildings and tourist attractions. Throsby also introduces contingent valuation methods (CVMs) that



attempt to elicit information concerning the minimal level of compensation required by an individual to forgo consumption of a public good or the maximum amount an individual would be willing to pay to obtain a nonmarket amenity. See also Van Kooten and Bulte (2000, p. 113).

15. In practice, copyright considerations are often illegally ignored in small off-off-Broadway or regional productions. Copyright would, of course, be enforced in any important commercial production.

16. In acquiring rights to a play, the producer adheres to Dramatists' Guild option-contract stipulations that provide the playwright with a nonrefundable deposit, to be forfeited if the play is not produced within a year or some shorter period. In addition, the dramatist is entitled to royalties on a sliding scale, between 5% and 10% of the box-office gross, and to the bulk of receipts from ancillary rights, including film, cable television, and foreign productions.

A prominent example is the Rodgers & Hammerstein musical *Oklahoma!* The fees for rights for a major performance of this show are customarily in the area of 8% of box-office gross, with an advance against royalties of \$18,000 or more. See *Variety*, March 29, 1993.

17. Yet, as Frey and Pommerehne (1989, p. 35) have noted, theatrical productions *can* be profitable if the audience size is large, the fixed costs are small, there is price discrimination (e.g., seats with a better view are priced higher), and there are subsidiary sources of income (e.g., video, film).

18. The New York State Attorney General's office had at one time compiled statistics on offering prospectuses for Broadway and off-Broadway shows. Over the 11 seasons between 1972–3 and 1982–3, for example, some 948 shows in this sample (which included shows that never opened but excluded some prominently successful shows in which funding was privately raised) lost a grand total of \$66.6 million on capitalizations of \$267.5 million. There was not a single season in which these shows, in the aggregate, generated profits. Healy (2010e) writes that only around 20% to 30% of Broadway shows ever turn a profit. Shows that have run longer than seven years as of 2012 include *The Lion King* (14 years) and *Wicked* (8 years). See also O'Connell (1997), *New York Times*, June 23, 2011, and Maloney (2012).

Rosenberg and Harburg (1993, p. 14) illustrate that the percentage of Broadway musicals (including revivals) that failed to return investors' funds, the "flops," consistently averaged 76% of the projects launched between 1945 and 1990. The figure is close to the flop average between 1925 and 1935. Rothstein (1988) notes that in the 17 months after *Starlight Express* opened (in March 1987), this show took in \$35 million and was seen by more than 925,000 people – and it had not yet recouped its investment. As of 1995, one of the most expensive nonmusical flops had been *On the Waterfront*, which lost its entire \$2.6 million capitalization after eight performances. But in early 2003, *Dance of the Vampires* closed after a loss of \$12 million (56 performances), giving it, along with *Capeman*, *Carrie*, and *Spider-Man: Turn Off the Dark*, the distinction of being among the costliest flops in Broadway history. Other musical flops as listed in Berfield (2005) include *The Mambo Kings* in 2005, *Bombay Dreams* (with 284 performances) in 2004, and *Seussical* (with 198 performances) in 2000. See also Mandelbaum (1991), McKinley (2003), and Healy (2013a), who describes the *Spider* loss and the show's move to Las Vegas.

Given the high likelihood of loss and the need for more capital, producers now structure deals in which investors are able to recoup investments more rapidly. In the traditional approach, the creative team, cast, and theater owner are paid first out of the weekly box office, after which theater expenses and other costs are deducted. Only then, as Hughes (2006) notes, do investors receive a return. In another variation of this, a profit



or royalty pool is set up, but the show has to be profitable before investors are paid. The newer formulas, used especially for the more expensive musical productions, tack a weekly amount onto a show's operating budget – in effect, an amortization allowance. In the case of *The Wedding Singer*, capitalized at \$11.75 million in 2006, investors receive around 2% of the capitalization per week until they have recouped 110% of their investment.

In all, theatrical producer Sol Hurok perhaps summed it up best when he said (*New York Times*, August 28, 1970), “If I would be in this business for *business*, I wouldn't be in this business.”

**19.** Despite the odds against success, angels, as well as large entertainment companies, continue to be attracted to Broadway. Every so often, a show (e.g., *The Producers*, first staged in 2001) will provide spectacular returns on investment, especially when eventual revenues from sales of cable television, movie, recording, and other rights, as well as profits from road-show productions, are included. And Healy (2011d) tells of Broadway flops that have turned profitable after being fixed overseas. See also Blumenthal (2001) and Healy (2009, 2014a). Healy (2010e) indicates that the Broadway musical *The Addams Family* also began with strong ticket sales.

That is because when shows are successful, they are incredibly so. According to *Variety* of February 15, 1989, *Cats* had become the most profitable (in absolute dollars) theatrical production to date, earning net profit in North America (United States and Canada) of approximately \$44 million (and another \$14.5 million from the London and other foreign editions). The base investment made by the Shubert Organization, ABC Entertainment, Metromedia Corp., and Geffen Records in 1982 was \$3.9 million, and the Andrew Lloyd Webber production thus returned more than 11 times the investment in North America alone. Because Webber, as author, and the other royalty participants receive about 25% as a license fee plus royalties, the actual gross profit was \$58 million. As of June 1997, when it became the longest-running show in Broadway history, *Cats* was still grossing more than \$350,000 a week and had generated revenues of more than \$329 million on Broadway and \$2.2 billion worldwide.

However, *Phantom of the Opera* had by early 1998 actually grossed more, with \$335 million in Broadway revenues and \$2.6 billion in worldwide ticket sales. By 2003, *Phantom* had become the third-longest-running show, after *Les Misérables*, which opened in 1987 for a cost of \$4.5 million and closed in 2003 (as second-longest runner) after grossing more than \$390 million in 6,612 performances on Broadway (\$1.8 billion worldwide). By the end of 2009, *Phantom* had become the longest-running show, with more than 9,000 Broadway performances, had grossed \$5 billion worldwide, and had been seen by more than 100 million people in 25 countries. Healy (2012b) writes that by February 2012 the show had been performed more than 10,000 times and had generated \$845 million just on its Broadway run. See also Healy (2012a) about the success of Broadway musicals in Hamburg and Healy (2013b) on highly paid stars (\$100,000+ per week in 2013) boosting Broadway revivals.

McKinley (2004) reports that *Wicked* also had one of the quickest returns of capital, recouping its \$14 million capitalization in 14 months, whereas *Avenue Q* required 10 months to recoup \$3.5 million. And *Book of Mormon* recouped its \$11.4 million investment in 8 months. Healy (2011a) notes that *The Addams Family* closed on Broadway in 2011 without earning back its \$16.5 million capitalization after a 22-month run. Yet it ended up grossing nearly \$1 million a week on the road. See Grimes (1997); *Variety*, January 26, 1998; and *New York Times*, October 3, 2002.

Other big winners have included *Hello, Dolly*, which netted \$9 million on a \$420,000 investment (a 21-to-1 return, with investors splitting the profit equally with the producer,

David Merrick). *Fiddler on the Roof* earned \$12.4 million on a \$375,000 investment. And Disney's *Beauty and the Beast*, with an initial investment believed to be \$11.9 million, was also a huge success despite its cost. See Witchel (1994) and Lyman (1997). Disney's *Lion King* was one of the most expensive, costing \$20 million (*New York Times*, November 29, 2003). As noted in Barnes (2005a), by 2005 it had taken in more than \$2 billion from all sources, and by 2011, \$4.2 billion worldwide. And through 2008, *Mamma Mia!* had generated worldwide revenues of \$2 billion. *The Book of Mormon*, taking in \$1.6 million a week just in its New York performances, is also a billion-dollar property, as its touring and Chicago productions generate similar weekly grosses. A London production was added in 2013.

In 2008, *Shrek the Musical* was capitalized by DreamWorks at \$26 million and started well. However, as Hoffer (2009a) later discusses, even though the show eventually closed its Broadway run at a loss, it will likely recoup totally once national tours, stock, and amateur school production rights fees are factored in. For the first ten years, authors split 60–40, and then for the next eight years, authors usually receive an even higher percentage.

Healy (2010a, b) describes the musical *Spider-Man: Turn Off the Dark*, which was capitalized in late 2010 at a record high cost of around \$75 million. With a running cost of around \$1.0 million to \$1.3 million a week, the show's producers, as described in Healy (2011b), expected to recoup with aggressive ticket pricing and from ancillary-market sources. The show ultimately grossed \$210 million on Broadway after 1,268 performances. According to Healy (2014d), producers and investors had lost \$60 million on the Broadway run, but might reduce the loss if the show is popular in its Las Vegas version. In comparison, the cost of *The Phantom of the Opera* was \$8 million in 1988, and *Wicked* cost \$14 million in 2003. See also Green (2010), Healy and Flynn (2011), Healy (2011e), and CBS's *60 Minutes* broadcast of a *Spider-Man* segment, November 28, 2010.

Reibstein (1986) suggests that, to succeed, straight plays should generally have weekly production costs that are half or less of the theater's box-office capacity, although musicals will usually range higher. Weber (1993) suggests that a musical should now be able to pay back within a year. Also see Passell (1989) and Adler (2004).

As Healy (2010c) recounts, *The Fantasticks* is the play that had the highest rate of return. Investors or their heirs make money from all shows, including revivals, for 18 years following the final performance of the original show, which was in 2002. The play opened in 1960 and ran for a record 17,162 performances, and if payouts had been reinvested in Treasury bills, the annual return over 50 years would have averaged 15.4%.

**20.** For example, Gamerman (2010) writes that foreign productions of *The Lion King* have grossed \$2.2 billion, which Disney says is almost three times that of the show's Broadway run.

**21.** Rosenberg and Harburg (1993, p. 8) note that as of 1991, the Shubert Organization owned or operated 17 theaters, the Nederlander 10, and Jujamcyn 5, with the proportion of the Broadway gross taken by each organization split approximately 53%, 28%, and 19%, respectively. Analysis of the increasingly integrated role of nonprofit producers and theater owners (who benefit from tax exemptions) with the major theater owners is given in Rockwell (2002). Healy (2010d) describes a shortage in available Broadway theaters in 2010.

**22.** Such investors are offered, in return for their capital, a share of potential profits (usually half of any profits earned by the production) through a limited partnership or, since 1994, a limited liability company (LLC) arrangement. The New York Limited Liability Company Law became effective in October 1994 and has stirred debate as to whether an LLC structure offers significant advantages over traditional limited partnerships. See Farber (1995, 1997) and Wasser (1995).

As in films, financing can be exempt from full SEC registration and fall under Regulation A or Regulation D if the number of investors is relatively few and the capital raised is less than \$5 million. Until 1990, New York State theatrical law did not permit a pool of capital to be raised for the financing of more than one show. Andrew Lloyd Webber's Really Useful Group (RUG) was the first company to attempt, in 1990, to solicit investment capital for more than one show and for shows that were not specifically identified. RUG had hoped to raise \$20 million from a private placement offering to finance *Aspects of Love* and a touring company of *Phantom of the Opera*. See *Variety*, October 1, 1990.

**23.** For off-Broadway productions, Farber (1993, p. 6) notes that, if the author is not well known, the usual royalty payment is a rate of 5% of the gross weekly box office for nonmusicals and a rate of 6% for musicals. But the rate for famous authors would scale up to 10%. Off-Broadway producers' fees are usually between 1% and 2% of gross weekly box-office receipts, with the higher amount sometimes only after recoupment of costs. Investors in a show's limited liability partnership would normally receive 50% of the producing company's profits. See Cox (2013a).

**24.** Box-office cash flows may also be diverted from the production or be collected in ways that are disadvantageous for the producer. For example, as Collins (1992) notes, ticket brokers sometimes offer box-office workers payments, known as "ice," for blocks of seats to a hit show. The brokers then resell the tickets at a premium. The practice reduces the number of good seats available to the public and potentially caps the producer's total receipts at less than what they would otherwise be. Courty (2003) examines ticket resale economics.

**25.** See Hughes (2005b).

**26.** If  $X$  = utilization percentage, then the formula is  $X = \$100,000 / (500 \text{ seats} \times \$30 \text{ ticket price} \times 8 \text{ performances})$ .

**27.** Cox (2013b) writes of how Disney's Broadway production of *Lion King* has made effective use of dynamic pricing strategies that have even been able to capture much of the ticket scalpers' premiums. See also Karp (2013c) and Healy (2014b).

**28.** See Lawson (1983).

**29.** Although all Broadway productions follow contract-specified minimum-scale guidelines, the percentage of unemployed members of performing arts unions is chronically high, and for smaller productions, union specifications are often ignored or waived. For instance, to encourage low-budget productions (e.g., off-Broadway) that will provide good experience for new performers, Equity waives many of its minimums in theaters with seating of fewer than 100. Still, as noted in McKinley (2005), off-Broadway productions have recently been faced with financial problems as the average production cost ranges to more than \$500,000. This article illustrates the commercial off-Broadway costs for the musical *Little Ham*, which opened in 2002, as follows.

Physical production (scenery, props, costumes, etc.)	\$69,500
Fees (for set design, choreography, makeup, and managers)	71,834
Rehearsal salaries (actors, understudies, etc.)	79,400
Rehearsal expenses (hall rentals, audition pianists, etc.)	5,000
Advertising and publicity	86,000
General and administrative (fees, insurance, payroll taxes, etc.)	78,548
Cost of developmental production	150,000
Total production cost	\$540,282

30. Gascoigne (2003, p. 124) describes the Song era and Parks (2005, p. 390) the Medici era.
31. McAndrew (2010) provides a detailed overview of art market history.
32. Barboza, Bowley, and Cox (2013) estimated China's auction market in 2012 to have been \$8.9 billion versus \$8.1 billion in the United States.
33. Gerlis (2014a, b) writes that the database of auction sales indicates that 1.8 million works of fine art were offered at auction in 2012 but that this is miniscule compared with the number of daily stock, bond, and foreign-exchange trades. Although auction prices are made public, dealers' prices are not public information.
34. Gerlis (2014b) suggests that "price levels for art do not reflect its fundamental characteristics, rather the fortunes of the buyers." In other words, substantial losses in other markets will lead to lower prices for artworks. See Baumol (1986) on art pricing and by extension Buelens and Ginsburgh (1993). Pogrebin and Flynn (2013) explain how auctions operate and the role of guarantees in auctions. Auction fraud, corruption, and other problems in China's art market are extensively covered in Barboza, Bowley, and Cox (2013).
35. See also Chapter 1, note 25, concerning "positional goods" and Mandel (2009).
36. Kräussl (2010, pp. 64–84) explains that art price indices are usually designed using repeat-sales data, hedonic factor composites that combine different attributes and characteristics, and hybrid models that combine the two approaches. He writes that returns to art over time "vary between genres and between periods, and whether art outperforms or underperforms the stock market will depend on the art market studies, the period looked at, and the methodologies used. . . . [S]tudies on the returns on art investment have produced very mixed results." Another interesting study is by Takato et al. (2009), in which it is shown that demand for Japanese art during the 1980s was positively correlated with both art and stock market prices. See also Crow (2011, 2012) on China's art market, the world's largest, with estimated 2011 auction sales (including commissions) of \$18.1 billion.

A frequently cited study (and annual index) is Mei and Moses (2002), in which analysis of a new data set compiled from repeated sales between 1875 and 2000 found that "art outperforms fixed income securities as an investment, though it significantly underperforms stocks in the U.S. Art is also found to have lower volatility and lower correlation with other assets." The opposing view is in Gerlis (2014a, b), who suggests that correlation with other assets is high rather than low. Atukeren and Seckin (2007) attempt to further estimate the intangible joy (i.e., psychic return) of looking at artworks. Goetzmann, Renneboog, and Spaenjers (2011) investigated the relationship of art to equity market indices and found evidence "of a long-run relation between top incomes and art prices." See Frey and Eichenberger (1995), Beggs and Graddy (2009) about art auction anchoring effects, and Mandel (2009) about art as a luxury good. Also, see Throsby (2003), Campbell (2008), Soloveichik (2010) on originals as a capital asset, Goetzmann, Renneboog, and Spaenjers (2011), and Ashenfelter and Graddy (2011) on auction sales rates.

37. The notion of the arts and the relationship to economic evolution appears in Potts (2011), who writes (p. 2), "the arts, cultural and creative sectors deal with the human interface, with the new ways of being and thinking and interacting . . . they operate on the demand side of economic evolution, whereas science and technology operate mostly on the supply side." See also Baumol and Bowen (1968), Blaug (1976), Netzer (1978), and Throsby and Withers (1979) for the traditionalist approaches to the arts as being largely in need of public subsidy, rife with cost diseases and stagnant productivity. Topics of potential interest to economists, all treated in the volume edited by Hendon, Shanahan, and MacDonald (1980), include a mathematical model for support of the arts (Seaman 1980), an analysis of artistic innovation using information theory (Owen and Owen 1980),

development of a composer supply function (Felton 1980), and estimation of a demand function for Broadway theater tickets (Kelejian and Lawrence 1980). In addition, Moore (1968) developed a model of demand for theater as a function of income, the supply of shows, and the real price of tickets. The *Journal of Cultural Economics* is also an important source for the most recent studies in this field.

**38.** Following a similar line of analysis, Throsby (2001, p. 107) presents a model of artistic production (creativity) that, among other things, includes variables for the level of cultural value produced, the level of economic value produced, arts labor time, earned income, and several other factors.

**39.** More broadly, the economics of culture industries is being increasingly analyzed within the context of political, sociological, and psychological impacts in books such as those by Hesmondhalgh (2002) and Steinert (2003).

**40.** Such price-elasticity estimates appear to range from 0.4 to 0.9. See also Gapinski (1986).

**41.** The empirical work is compared in Heilbrun and Gray (2001, p. 99).

**42.** Economists classify price discrimination into three categories. In the most common, third-degree form, monopolists exploit the differences in elasticity of demand in two different markets to increase total revenue by the highest amount possible. In second-degree discrimination, higher prices are first charged for smaller amounts demanded than for larger amounts, even if the costs of providing the different-sized units are the same. In first-degree discrimination, the seller charges the buyer the highest price the buyer is willing to pay for that unit, and the seller charges a different price for each unit, thereby totally eliminating the consumers' surplus. Frank (2006) also argues that price discrimination enables consumers "to enjoy both lower prices and higher quality than would be possible if sellers charged the same price to everyone."

**43.** Another form of price discrimination appears when tickets to major events are "scalped"; that is, resold by third parties at prices that are usually much higher than at the box office. The issue is explored in Happel and Jennings (1995) and Davidson (2013).

**44.** Frey and Pommerehne (1989, p. 46) note that "theaters, operas, ballet and orchestras behave differently with respect to output, inputs and the production process depending on whether they are co-operatively run, profit-oriented and private, or nonprofit-oriented and public." Hansmann (1981) explores the reasons for the preponderance of nonprofit-institution involvement in the high-culture performing arts and notes that high fixed production costs relative to marginal costs and overall demand force performing arts groups to engage in price discrimination if they are to survive without subsidies. But because opportunities for effective ticket-price discrimination are limited, the nonprofit organization structure seems best suited to encouraging voluntary donations. In examining the nonprofit aspects, DiMaggio (1984, p. 57) suggests that, "because nonprofit organizations need not maximize net income, public policy assumes that they will maximize something else . . . a combination of services and aesthetic quality." The CBS show *60 Minutes* of November 25, 2012 included the segment "The NYC Ballet Forges the Art Form's Future."

**45.** Potts (2011, p. 21).

**46.** About City Opera's financial struggles, see Cooper (2013) and Maloney (2013).

**47.** This paraphrases Schoenfeld (2012, prelude).

**48.** In reference to the network-television business, for example, it has been noted by Baumol and Baumol (1984, p. 36) that there will be

an initial period of decline in total costs (in constant dollars) followed by a period in which . . . costs begin to behave in a manner more and more similar to the live performing arts. The reason is that

the cost of the highly technological component (transmission cost) will decline, or at least not rise as fast as the economy's inflation rate. At the same time, the cost of programming increases at a rate surpassing the rate of inflation.

Financially strapped performing arts companies are thus tending increasingly toward being merged. See Russell (2006) and Orden (2010).

**49.** See, for example, Isenberg (2005).

**50.** For instance, performances of major opera companies (The Met and San Francisco) are now being digitally distributed to movie theater screens and also via DVDs, Internet streams and downloads, and on-demand cable-television programs. See Wakin (2007) and Maloney (2012b).

**51.** See Towse (2010, pp. 39–44). For international data, see [unstats.un.org](http://unstats.un.org) and the UNCTAD *Creative Economy Report 2008*, which sets up classifications. In the United States, such data are available from the [www.census.gov](http://www.census.gov) North American Industrial Classification System (NAICS). The United Nations statistics division uses the International Standard Industrial Classification (ISIC).

**52.** Yet some manner of subsidy – usually a combination of government support and tax incentives for private individuals and corporations – is still typically (but arguably) seen as the only way to sustain or expand high-culture activities.

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