



Research Division Note #36 - March 31, 1992

THE ARTS IN THE GDP: RECENT BENCHMARK PRODUCES  
MAJOR REVISIONS IN THE CONSUMER ADMISSIONS SERIES

1990 consumer expenditures for admissions to performing arts events were \$5.0 billion in current terms, a \$1.1 billion increase from 1989, and \$4.1 billion in constant dollar terms (1987=100). Since 1982, the Research Division has reported on annual admission expenditures for the performing arts and two other types of admission expenditures, motion picture theaters and spectator sporting events, based on data from the Bureau of Economic Analysis. In 1990, expenditures for performing arts events surpassed those for both spectator sports and motion pictures. Performing arts admission receipts totaled \$5.0 billion in 1990, while admission receipts for motion picture theaters rose only \$0.2 billion from 1989 to \$4.1 billion, and admissions to spectator sports events increased \$0.2 billion to \$4.5 billion.

The data in this Note reflect the latest five-year revision of the Input/Output Model that the Bureau of Economic Analysis employs to prepare periodic estimations of the nation's productivity. These revisions are based on benchmark estimates from the five-year Economic Census conducted by the Bureau of Census. The model relates the economic activity in all sectors and provides the means for estimating national productivity.\* In addition to the model revisions, this Note reflects two other major changes: 1) a shift to use of gross domestic product (GDP) rather than gross national product (GNP) as the primary measure of production; and 2) a shift in the base period from 1982 to 1987.

The impact of the benchmarking, or model revisions, on the estimates of consumer expenditure admissions for these three categories is shown in the table below (the new post-benchmark data will be used in future "Arts in the GDP" Notes until the next revision). The model revisions resulted in a significant downward revision for performing arts and motion picture admissions from previous years, and an upward revision for spectator sports admissions. These changes are due to a slight expansion in the categories included under spectator sports, and a smaller amount of growth reported in the 1987 Economic Census for motion picture and performing arts establishments receipts than had previously been projected.

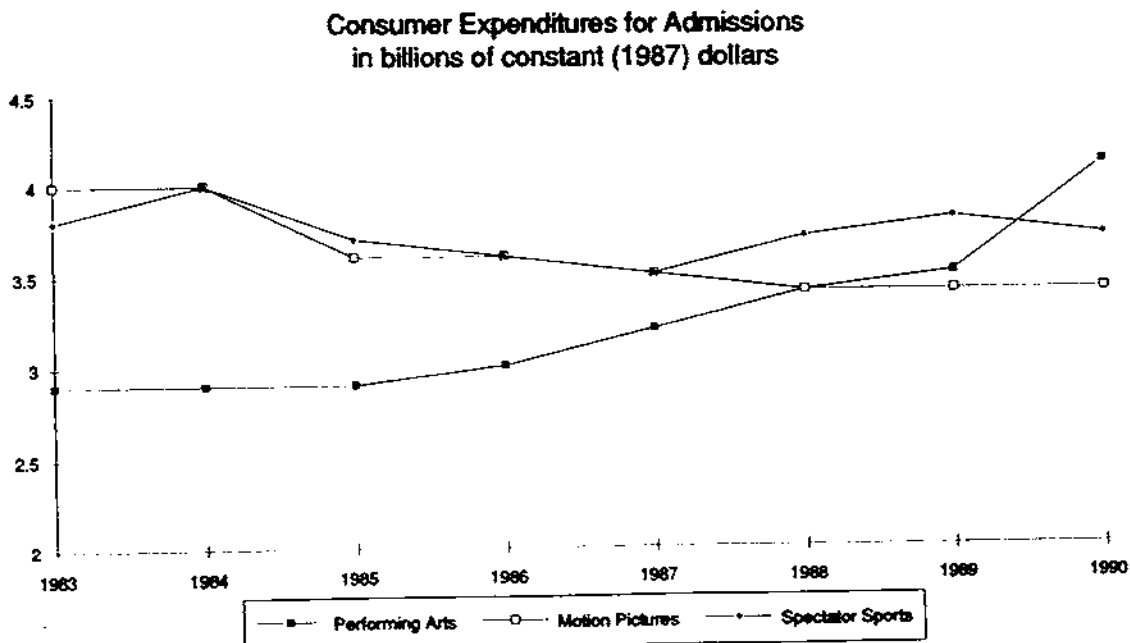
**ADMISSIONS EXPENDITURES for PERFORMING ARTS, MOTION PICTURES,  
and SPECTATOR SPORTS in billions of current dollars**

	Performing Arts			Motion Pictures			Spectator Sports		
	(a)	(b)	(c)	(a)	(b)	(c)	(a)	(b)	(c)
1979	1.5	1.5	0.0	2.9	2.8	-0.1	1.9	2.1	0.2
1980	1.9	1.8	-0.1	2.7	2.6	-0.1	2.0	2.3	0.3
1981	2.1	2.1	0.0	2.9	2.7	-0.2	2.0	2.4	0.4
1982	2.1	2.2	0.1	3.3	3.1	-0.2	2.3	2.7	0.4
1983	2.4	2.3	-0.1	3.6	3.2	-0.4	2.6	3.0	0.4
1984	2.7	2.5	-0.2	4.0	3.5	-0.5	2.9	3.4	0.5
1985	3.0	2.6	-0.4	3.6	3.3	-0.3	2.9	3.3	0.4
1986	3.3	2.8	-0.5	3.9	3.4	-0.5	2.9	3.4	0.5
1987	4.0	3.2	-0.8	4.2	3.5	-0.7	3.0	3.5	0.5
1988	4.5	3.6	-0.9	4.4	3.6	-0.8	3.2	3.9	0.7
1989	5.0	3.9	-1.1	5.0	3.9	-1.1	3.5	4.3	0.8
1990	5.5	5.0	-0.5	5.2	4.1	-1.1	3.7	4.5	0.8

(a) Pre-benchmark      (b) Post-benchmark      (c) Net Change

Recent trends (in constant 1987 dollars) for performing arts, motion pictures, and spectator sports admission expenditures are shown on the graph below and described here:

- 1) Admissions to performing arts events have experienced constant growth over the last five years, with 1990 experiencing the greatest growth, 17 percent in constant dollar terms. Since 1986 admissions have increased 33 percent in constant dollars.
- 2) Admissions to motion picture theaters have remained the same or declined each year since 1986, in constant dollar terms. The overall decline since 1986 is 6 percent.
- 3) Spectator sports admissions have increased slightly since 1986, in constant dollar terms. Admissions declined 3 percent from 1986 to 1987, increased 9 percent from 1987 through 1989, and declined 3 percent into 1990, for an overall increase of three percent.



As mentioned in the previous Note on this subject (Research Division Note #34, November 2, 1990), the "Admissions to Performing Arts Events" category includes not only non-profit organizations, such as symphony orchestras or ballet companies, but also the for-profit sector, such as Broadway theater and rock music concerts. Further, admission receipts is a broad category which includes not only the price of a ticket, but also can include such receipts as concessions, etc.; therefore, admission receipts are not exclusively correlated with attendance. Despite these caveats, the data demonstrate a strong growth in admission receipts for performing arts events. This is especially significant in light of the growth in the availability of alternatives to live performances during this same period.

Additional observations on the five (of ten) components of the Recreation Expenditure section of the GDP that are most closely related to the arts are as follows:

1) Consumer expenditures in 1990 for radios and TV sets, records, musical instruments, and personal computers are estimated at .89 percent of GDP and 17.42 percent of recreation expenditures. The five-year period covered in Table 2 shows that this durable equipment component of the GDP experienced slow growth from 1986-1988, when it may have peaked, and now appears to be in decline. When considering it as a component of recreation expenditures, it experienced cycles of growth and decline until its peak in 1988, and has since been declining. Still, it has represented nearly one-fifth of total recreation expenditures. This category maintains its place as the largest share of both the GDP and of recreation expenditures among all categories examined in this Note.

2) Consumer expenditures in 1990 for admission to performing arts events were 0.09 percent of the GDP and 1.78 percent of the recreation component. This component has experienced overall growth as part of both GDP and recreation expenditures over the five years examined.

3) Consumer expenditures in 1990 for books and maps were 0.32 percent of the GDP and 6.28 percent of the recreation expenditures. Since 1986, expenditures for these items have experienced overall growth as part of both components.

4) Consumer expenditures in 1990 for admissions to motion picture theaters were estimated at 0.07 percent of GDP and 1.46 percent of recreation expenditures. This component remained at a constant .08 percent of GDP in 1986 and 1987, but in 1988 it declined to .07 percent and remained steady for the next two years. As a component of recreation expenditures, motion picture admissions declined from its 1986 level of 1.67 percent to 1.46 percent, where it has remained steady since 1988.

5) Consumer expenditures for admission to spectator sports events in 1990 were estimated at 0.08 percent of the GDP and 1.61 percent of recreation expenditures. Admissions to sporting events has remained at a steady .08 percent of the GDP since 1986. As a component of recreation expenditures, it declined to a low of 1.56 percent in 1987 and has been increasing since.

Table 3 illustrates another way of observing the changes in the three entertainment admissions categories. The increase in total expenditures will necessarily increase with the size of the population, even though the average individual may continue to spend the same amount. For an examination of the effect of increased population, per capita expenditures have been calculated for the five years covered in this Note, by dividing by the number of persons in the population for each time period. Unpublished tabulations from the Bureau of Economic analysis have been made available for more precise calculations of per capita expenditures. The table shows current dollar changes in the three categories and changes in constant dollar amounts which have been deflated to 1987 dollars.

Based on data from the Bureau of Economic Analysis in 1990, the average individual spent \$54.68 on admissions to specified entertainments, including performing arts events, motion picture theaters and spectator sports. In constant dollar terms (1987=100), this was \$45.03.

1) Performing arts admission expenditures in 1990 were \$20.10 per capita. In constant dollar terms this was \$16.49 and compares with \$12.47 in 1986, an increase of 32.24 percent for the five-year period.

2) Per capita expenditures for motion picture admissions were \$16.49 in 1990. This was \$13.67 in constant dollar terms and compares with \$14.96 in 1986, and a decrease of 9 percent.

3) Spectator sports admission expenditures per capita were \$18.09 in 1990. In constant dollar terms this was \$14.88 and compares with \$14.96 in 1986, a negligible decrease over the five-year period.

CAVEATS: This Note uses the latest annual data on recreation expenditures published in the Survey of Current Business, December 1991, and unpublished materials obtained from the Bureau of Economic Analysis. Retrospective revisions for the two most recent years should be anticipated.

\* A more detailed discussion of the system and its periodic revisions can be obtained from the Research Division by requesting a copy of : Horowitz, Harold, "The Arts in the National Income and Product Accounts," The Economics of Cultural Industries, Volume 1, Proceedings of the Third International Conference on Cultural Economics and Planning, April 25-28, 1984; University of Akron, 1984.

TABLE 1. ADMISSIONS RECEIPTS FOR PERFORMING ARTS EVENTS,  
MOTION PICTURES, AND SPECTATOR SPORTS, 1986-1990

	<u>1986 (\$ Millions)</u>		<u>1987 (\$ Millions)</u>		<u>1988 (\$ Millions)</u>		<u>1989 (\$ Millions)</u>		<u>1990 (\$ Millions)</u>	
	<u>Current</u>	<u>Constant</u>	<u>Current</u>	<u>Constant</u>	<u>Current</u>	<u>Constant</u>	<u>Current</u>	<u>Constant</u>	<u>Current</u>	<u>Constant</u>
<u>Admissions Receipts to Specified Entertainments</u> (change from previous year)	9,600 (4%)	10,200 (0%)	10,200 (6%)	10,200 (0%)	11,100 (9%)	10,500 (3%)	12,100 (9%)	10,700 (2%)	13,600 (12%)	11,200 (5%)
Performing Arts Events	2,800 (8%)	3,000 (3%)	3,200 (14%)	3,200 (7%)	3,600 (13%)	3,400 (6%)	3,900 (8%)	3,500 (3%)	5,000 (28%)	4,100 (17%)
Motion Pictures	3,400 (3%)	3,600 (0%)	3,500 (3%)	3,500 (-3%)	3,600 (3%)	3,400 (-3%)	3,900 (8%)	3,400 (0%)	4,100 (5%)	3,400 (0%)
Spectator Sports	3,400 (3%)	3,600 (-3%)	3,500 (3%)	3,500 (-3%)	3,900 (11%)	3,700 (6%)	4,300 (10%)	3,800 (3%)	4,500 (5%)	3,700 (-3%)

NOTE: Constant (1987=100) \$ values are based on implicit price deflators used for these expenditures by the Bureau of Economic Analysis, U.S. Department of Commerce in unpublished tabulations.

All data are based on the December 1991 Bureau of Economic Analysis (BEA) comprehensive revision of the U.S. National Income and Product Accounts.

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TABLE 2. TOTAL PERSONAL CONSUMPTION EXPENDITURES AND RECREATION EXPENDITURES AS A PERCENT OF GDP, 1986-1990

	<u>1986</u>		<u>1987</u>		<u>1988</u>		<u>1989</u>		<u>1990</u>	
GDP in Billions (current \$)	\$4,268.6		\$4,539.9		\$4,900.4		\$5,244.0		\$5,513.8	
Total Personal Consumption Expenditures as a % of GDP	66.78%		67.23%		67.26%		67.08%		67.88%	
Recreation Expenditures as a % of GDP	4.77%		4.93%		5.04%		5.08%		5.08%	
<u>Selected Recreation expenditures as a % of GDP and of all Recreation Expenditures</u>	<u>GDP</u>	<u>Recreation</u>	<u>GDP</u>	<u>Recreation</u>	<u>GDP</u>	<u>Recreation</u>	<u>GDP</u>	<u>Recreation</u>	<u>GDP</u>	<u>Recreation</u>
Radio and TV Receivers, Records, Musical Instruments and Personal Computers	0.85%	17.76%	0.86%	17.43%	0.91%	18.03%	0.91%	17.84%	0.89%	17.42%
Books and Maps	0.27%	5.59%	0.29%	5.81%	0.30%	5.92%	0.30%	5.93%	0.32%	6.28%
Admissions to Performing Arts Events	0.07%	1.37%	0.07%	1.43%	0.07%	1.46%	0.07%	1.46%	0.09%	1.78%
Admissions to Motion Picture Theaters	0.08%	1.67%	0.08%	1.56%	0.07%	1.46%	0.07%	1.46%	0.07%	1.46%
Admissions to Spectator Sports	0.08%	1.67%	0.08%	1.56%	0.08%	1.58%	0.08%	1.61%	0.08%	1.61%

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TABLE 3. PER CAPITA EXPENDITURES FOR SELECTED SUBDIVISIONS OF PERSONAL CONSUMPTION FOR RECREATION, 1986-1990

	<u>1986</u>		<u>1987</u>		<u>1988</u>		<u>1989</u>		<u>1990</u>	
	<u>Current</u>	<u>Constant</u>	<u>Current</u>	<u>Constant</u>	<u>Current</u>	<u>Constant</u>	<u>Current</u>	<u>Constant</u>	<u>Current</u>	<u>Constant</u>
Total Admission Expenditures to Specified Entertainments \$ Per capita	\$ 39.89	\$ 42.38	\$ 42.01	\$ 42.01	\$ 45.30	\$ 42.85	\$ 48.92	\$ 43.26	\$ 54.68	\$ 45.03
Performing Arts Admissions \$ per capita	\$ 11.63	\$ 12.47	\$ 13.18	\$ 13.18	\$ 14.69	\$ 13.87	\$ 15.77	\$ 14.15	\$ 20.10	\$ 16.49
Motion Picture Admissions \$ per capita	\$ 14.13	\$ 14.96	\$ 14.41	\$ 14.41	\$ 14.69	\$ 13.87	\$ 15.77	\$ 13.75	\$ 16.49	\$ 13.67
Spectator Sports Admissions \$ per capita	\$ 14.13	\$ 14.96	\$ 14.41	\$ 14.41	\$ 15.92	\$ 15.10	\$ 17.38	\$ 15.36	\$ 18.09	\$ 14.88

Note: 1986-1990 current and constant (1987=100) values were revised pursuant to unpublished tabulations obtained from the Bureau of Economic Analysis. Population estimates for 1986-1990 were taken from Statistical Abstract of the United States 1991, 111th Edition, Bureau of the Census, U.S. Department of Commerce, January 1991.

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