AN ANALYSIS OF RECREATION EXPENDITURES BY U.S. CONSUMERS, 1939 - 1988

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ABSTRACT

This empirical study examines the increases in average recreation expenditures during the period 1939 to 1988 to determine if consumers are spending more "real" dollars, of their personal consumption expenditures, on recreation. The analysis seeks to examine the reasons for these increases, and reviews trends in the twelve classifications of recreation. Finally, a validated recreation expenditures model is used to project future recreation expenditures.

Key Words: consumer recreation expenditures, disposable personal income (DPI), personal consumption expenditures (PCE), recreation classifications, recreation expenditures model.

INTRODUCTION

Since the earliest recorded civilizations, man has always had some degree of unobligated time. Historians describe countless forms of recreational pursuits which have been used to fill leisure hours, particularly by the wealthy and influential social classes of each era. It has only been within the past century, among the more highly industrialized nations, that both leisure and economic growth have made it possible for recreation to be widely available to all social classes (Kitchen, Miller and Graves, 1982).

Today's American has approximately twenty-five more free hours per week than did the citizen of 100 years ago (Barach, 1964). Use of this increased leisure time is a challenge, and it would be reasonable to assume that some of it might be spent in some form of recreation (Kitchen and James, 1970).

The purpose of this study was to determine if Americans are spending a greater percentage of their income on recreation, or if the increased spending on recreational pursuits is due to larger incomes from the rapid growth of the United States (U.S.) economy? Additionally, perhaps, the increase in expenditures upon recreation may only be the result of a much larger population spending at approximately the same per capita rate. All of these possible solutions were examined in an attempt to determine the source of the increasing sums being spent upon recreation (Kitchen and James, 1970).

Projections were made of future expenditures upon recreation assuming current trends continue. These projections will provide a tentative base for planning of facilities and services to meet the future recreational needs of the population.

METHODOLOGY

The first step in an analysis of consumer expenditures on recreation is to gather the most reliable data. The Economic Report of the President, 1989, yielded figures for Disposable Personal Income (DPI) and Personal Consumption Expenditures (PCE). U.S. Department of Commerce Publications (July 1989, 1989) provided data for twelve classifications and three sub-categories of recreation expenditures, and total consumer expenditures on recreation. Each classification and sub-category of recreation expenditures is designated by the U.S. Department of Commerce as either a durable good, non-durable good, or a service (See Table 1).

TABLE 1. U.S. Department of Commerce classifications of recreation expenditures

CLASSIFICATION	DESIGNATION
1 Books and Maps	Durable
2 Magazines, Newspapers, and Sheet Music	Non-Durable
3 Non-Durable Toys and Sport Supplies	Non-Durable
4 Wheel Goods, Durable Toys, Sports Equipment, Boats, and Pleasure Aircraft	Durable
5 Radio and TV Receivers, Records, and Musical Instruments	Durable
6 Radio and TV Repair	Service
7 Flowers, Seeds, and Potted Plants	Non-Durable
8 Admissions to Specified Spectator Amusements	Service
8a Motion Picture Theaters	Service
8b Legitimate Theaters and Opera, and Entertainments of Non-Profit Institutions	Service
8c Spectator Sports	Service
9 Clubs and Fraternal Organizations Except Insurance	Service
10 Commercial Participant Amusements	Service
11 Pari-Mutuel Net Receipts	Service
12 Other	Service

Dollar amounts, from the U.S. Department of Commerce (July 1989, 1989), are listed in terms of current dollars for each year, and therefore include inflationary effects and price changes over time. To remove inflationary effects and express the data in "real" terms, each classification and category was inflated or deflated by using the implicit price deflator (1982 = 100). Implicit price deflators for each year were acquired from the Economic Report of the President, 1989.

From these data and a regression analysis, a prediction model of consumer expenditures on recreation was developed. The model has been validated (Kitchen, et al., 1982; Kitchen and Hutchison, 1990) over a twenty-year period.

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RESULTS

Five-year average consumer recreation expenditures from 1939 to 1988 are presented in billions (1982 dollars) in Table 2. From 1939 to 1988 total recreation expenditures increased by $154.386 billion (+583%).

TABLE 2. Average annual consumer expenditures on recreation by recreation expenditure classification, 1939-1988 (in billions, 1982 dollars).

YEARS	TOTAL	BOOKS AND MAPS (1)	MAGAZINES AND NEWSPAPERS (2)	NONDURABLE TOYS AND SPORTS (3)	WHEEL GOODS & DURABLE TOYS (4)	RADIO & TV RECEIVERS (5)	RADIO & TV REPAIR (6)	FLOWERS, SEEDS & PLANTS (7)
1939-43	26.488	1.308	4.011	2.122	1.320	2.467	0.291	1.376
1944-48	34.793	1.696	4.488	3.053	2.073	2.726	0.657	1.627
1949-53	40.056	1.881	5.447	5.186	2.386	5.737	1.473	1.687
1954-58	45.483	2.239	6.200	6.151	3.715	6.872	2.141	1.789
1959-63	53.649	2.720	6.618	8.061	4.489	7.178	2.651	2.305
1964-68	74.195	3.726	8.080	10.887	7.403	12.447	2.862	3.741
1969-73	95.755	5.221	9.645	13.525	11.555	17.065	3.381	4.413
1974-78	112.731	6.045	9.663	14.602	15.900	22.337	4.032	5.210
1979-83	135.451	6.788	11.260	16.663	19.445	24.435	3.151	4.757
1984-88	180.874	8.206	12.943	21.515	28.400	37.253	2.747	5.448

YEARS	ADMISSION SPECTATOR EVENTS (8)	MOTION PICTURE THEATERS (8a)	LEGITIMATE THEATER (8b)	SPECTATOR SPORTS (8c)	CLUBS ETC. (9)	COMMERCIAL PARTICIPANT AMUSEMENT (10)	PARI-MUTUEL RECEIPTS (11)	OTHER (12)
1939-43	7.770	6.486	0.612	0.672	1.501	1.485	0.447	2.390
1944-48	10.521	8.633	0.942	0.946	1.919	1.949	1.163	2.921
1949-53	7.786	5.935	0.841	1.010	2.159	2.105	1.244	2.965
1954-58	6.413	4.551	0.980	0.882	2.282	2.488	1.531	3.662
1959-63	5.521	3.098	1.101	1.322	2.467	4.324	1.919	5.396
1964-68	6.672	3.227	1.247	2.198	2.697	5.238	2.473	7.969
1969-73	7.725	3.715	1.197	2.813	2.956	5.523	2.789	11.957
1974-78	7.227	3.256	1.312	2.659	2.881	6.668	2.728	15.438
1979-83	7.788	3.306	2.058	2.424	3.550	11.344	2.315	23.955
1984-88	8.532	3.266	2.831	2.435	4.183	13.211	2.174	36.262

Since 1939, several classifications realized significant increases. Wheel goods and durable toys increased $27.08 billion (+2,052%), and radio and TV receivers increased $34.786 billion (+1,410%). The only decrease was in the sub-category of motion picture theaters which declined $3.22 billion (-50%).

As shown in Table 3, average Disposable Personal Income (DPI), in billions (1982 dollars) increased from $609.7 billion in 1939 to $2,623.0 billion in 1988 (+330%). Average Personal Consumption Expenditures (PCE) also increased, from $516.3 billion in 1939 to $2,432.2 billion in 1988 (+371%).

An increase in total recreation expenditures is also apparent from average per capita recreation expenditure data (Table 4). Per capita, DPI increased from $4,554 in 1939 to $10,839 in 1988 (+138%). From 1939 to 1988 average per capita recreation expenditures increased from $198 to $747 (+277%).

TABLE 3. Average annual disposable personal income and personal consumption expenditures 1939-1988 (in billions, 1982 dollars).

YEARS	DISPOSABLE PERSONAL INCOME	PERSONAL CONSUMPTION EXPENDITURES	PCE AS A PERCENT OF DPI
1939-43	$ 609.7	$ 516.3	84.68%
1944-48	728.0	630.6	86.62%
1949-53	813.7	750.2	92.20%
1954-58	973.8	889.8	91.37%
1959-63	1,131.8	1,037.4	91.66%
1964-68	1,426.5	1,289.9	90.42%
1969-73	1,742.0	1,559.8	89.54%
1974-78	2,012.7	1,806.9	89.77%
1979-83	2,253.8	2,045.1	90.74%
1984-88	2,623.0	2,432.2	92.73%

TABLE 4. Average annual per capita disposable personal income and consumer expenditures on recreation 1939-1988 (1982 dollars).

YEARS	POPULATION (MILLIONS)	PER CAPITA (DPI)	PER CAPITA RECREATION EXPENDITURE
1939-43	134	$ 4,554	$198
1944-48	142	5,127	245
1949-53	154	5,284	260
1954-58	168	5,796	270
1959-63	184	6,151	292
1964-68	197	7,241	377
1969-73	208	8,375	460
1974-78	218	9,233	517
1979-83	230	9,799	589
1984-88	242	10,839	747

Figure 1 graphically illustrates the movement in consumer expenditures on recreation from 1939 to 1988. This figure shows average actual recreation expenditures and projected recreation expenditures (1982 dollars) to the year 2003 (Kitchen and Hutchison, 1990).

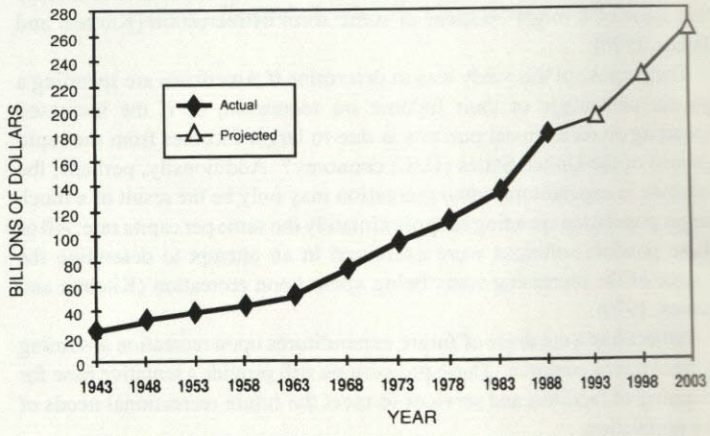

Figure 1. Consumer expenditures on recreation, 5-year averages (1982 dollars).

Further analysis of consumer spending showed that in 1939-43 consumers were spending $4.35 of each $100 of DPI on recreational pursuits as compared to $6.89 in 1984-88. Although an increase of $2.54 of each $100 of DPI on recreation expenditures over the past fifty years may not appear significant, it represents an increase of 58.4% for recreation expenditures relative to DPI.

Additionally, from 1939 to 1988 while consumers' PCE remained relatively stable as a percentage of DPI, recreation expenditures also increased as a percent of PCE. In 1939-43, consumers were spending $5.14 of each $100 of PCE on recreation as compared to $7.43 of each $100 of PCE on recreation in 1984-88. This is an increase of 44.5% ($2.29) relative to PCE over the fifty-year period.

Projections of expenditures on recreation were made using a model based on annual expenditures from 1939 to 1988 (Kitchen and James, 1970; Kitchen, et al., 1982; Kitchen and Hutchison, 1990). The model assumes that recreation expenditures, as all consumption expenditures, depend primarily upon money available for a family to spend, Disposable Personal Income (DPI). Linear regression analysis using DPI and total recreation expenditures for the years 1939 to 1988 (1982 dollars) was used to determine coefficients for $Y = a + bX$ with DPI as the independent variable.

TABLE 5. Estimated annual consumer expenditures on recreation: for 1989-2003 (in billions, 1982 dollars).

1989	$181.1
1990	187.1
1991	193.3
1992	199.6
1993	206.2
1994	212.9
1995	219.8
1996	227.0
1997	234.3
1998	241.9
1999	249.7
2000	257.7
2001	266.0
2002	274.5
2003	283.2

Previous projections developed by the model have proved to be very accurate (+/- 5%).

To use the model for predicting future recreation expenditures, an estimation of future DPI is needed. Examination of DPI trends for 50 years showed an average annual increase of 3.65%, while DPI trends for the most recent 20 years showed an average annual increase of 2.97%.

The recreation expenditures model ($Y = -20.595 + 0.070587X$) and projections of DPI with an annual increase of 2.97% were used to make annual projections of consumer expenditures on recreation (Table 5).

CONCLUSIONS

It is apparent that increases in spending on recreation have resulted primarily from increases in DPI. In constant 1982 dollars, average DPI has risen from $609.7 billion in 1939-43 to $2,623.0 billion in 1984-88. Concurrently, increased available leisure time has promoted a shift in the make up of the Personal Consumption Expenditure dollar. This shift from other personal consumption forms of expenditures to recreation has been a gradual process. All indications seem to point to the fact that increasing sums of money will continue to be spent on recreational items.

There have been notable shifts in expenditure patterns within the recreation market itself over the past fifty-year period (Table 2). Between the years 1939-1988, three categories (4, 5, 12) exhibited major increases as a percent of total recreation expenditures; and, three categories (2, 8, 9) showed a major decline. From 1969-1988, the shift within the recreation market itself seemed to indicate a trend towards investment in more expensive and durable commodities. Recreational items which served the person at home or close to home were increasing. Conversely, the service-type items in general were decreasing. Perhaps, this was directly related to the cost of fuel required to attend these types of activities, and the increased cost of the activity itself.

Projections, based on regression analysis, indicate that consumers will continue to spend increased sums of money on recreation. No accurate predictions can be made concerning shifts in expenditures within the recreation sector itself. These shifts will depend upon consumer preference which may be influenced by the introduction of new products or services.

In its simplest form, the combination of increased leisure time and increased DPI point to an ever-expanding leisure market. Consumer preferences and trends in the economy will decide how these increased sums of money will be spent within the recreation market in the future. Examples of specific impacts on traditional agriculture and natural resource management may include: land use changes from production agriculture or forestry to recreation; expanded activity in the horse industry from increased pari-mutual wagering and/or pleasure riding; and, the creation of alternative income sources for rural landowners from hunting or fishing activities.

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