

# Off-Track Betting and the New York State Economy

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## ABSTRACT

The creation of Off-Track Betting (OTB) in the state of New York led to a reallocation of parimutuel betting revenues between the state and race tracks to include local governments and cities. Coate and Ross (1974, 1978) concluded that with the changes in track attendance patterns, as bettors moved from racetrack attendance to OTB facilities, and the change in revenues flows between track operators, state authorities and local government, that state tax revenues from parimutuel betting and track operators revenues declined. The issue of revenue splits has continued to plague the relationship between state and local government and OTB operations - as demonstrated most recently by New York City's recent threats to shut down OTB facilities throughout the city which was just narrowly averted by a tenuous political compromise. This paper analyzes OTB, its effects and impacts on state and local government revenues, and the future of parimutuel betting in New York State.

## 1. INTRODUCTION

New York was the first state in the country to institute a system of off-track betting (OTB) in 1970. While part of the rationale for establishing OTB was to reduce illegal gambling in the state, it was also considered a means to increase revenue streams to the state as well as to local communities from gambling. Thirty-eight years later, New York City threatened to shut down all of its OTB locations due to high operational costs and the limited revenue streams returned to the city treasury. A complete shutdown was averted only when the state stepped in to assume control over city OTB facilities during the summer of 2008.

This is not the first time that NYC has had problems with its OTB operations. For the fiscal year ending 2007, NYC OTB operations closed with a net revenue of \$-3.38 million on a net total handle of \$1.03 billion (New York State Gaming and Wagering Board, 2008, p. 46). Thirteen years earlier, NYC OTB had found itself in a similar situation with a \$7 million dollar loss on \$742 million in total handle (Flint, 1994). During the 1980s, OTB brought in average net revenues of \$65 million annually for NYC (The Economist, 2008). Overall, revenues to the state since 1971 have increased from \$592 thousand to \$30.9 million (parimutuel tax and breakage, regulatory fees, and uncashed tickets) in 2007 (New York State Gaming and Wagering Board, 2008, p. 48).

Horse racing and parimutuel gambling in New York state is overseen by the New York State Racing and Wagering Board including oversight for horse racing and harness tracks as well as off track betting facilities. There are six separate OTB corporations in the state, that include the Capital, Catskill, Nassau County, New York City, Suffolk County, and Western districts. While NYC opened the first OTB facilities in the state in 1970, it was soon joined by the Capital district, and the rest followed within a few years.

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Over time, OTB operations and facilities expanded and now include intrastate and interstate betting, simulcasting, teletheaters, and telephone betting. As gambling in general has become more accessible not only across New York state but regionally and nationally, off track betting operations have had to modernize various facets and facilities of their operations to compete including allowing a full array of various restaurant and bar services and amenities to be offered at some facilities (Buchtal, 2004; Vallen, 1993;.CHRAQ, 1993). OTB facilities may also be set-up in restaurants as well (Frumkin, 2000).

The public and popular view of horse-racing and OTB in particular is that of an industry in decline with an aging clientele facing a multitude of competitive pressures from the increasing availability of alternatives. While there certainly is some truth to this viewpoint, nationwide from 1996 to 2003, total wagers at off track betting facilities across the 38 states that allow it, increased 53%, from \$8.7 billion to \$13.3 billion (Buchtal, 2004).

The underlying question for this paper is what is the viability of OTB in New York State and NYC. Economic analysts thirty-four years ago (see Coate and Ross, 1974) pointed out the various conflicts between state and local government as well as the racing industry that would arise from OTB especially as the result of split of the takeout rate between three different entities. Changes in these rates along with surcharges imposed on OTB corporations to support the racing industry have only exacerbated the problem, especially as it concerns NYC. The next section of this paper provides a review of the some of the literature on OTB, horse racing and parimutuel wagering. Following that is a statistical and econometric analysis of OTB operations. The conclusions of this study are presented in final section of this paper.

## **2. OTB AND NYS**

The establishment of OTB in the state presented a number of issues for a government enterprise. While the notion of a government entity operating a parimutuel wagering operation may have controversial at the time, other state governments later approved various forms of off track betting and other forms of legalized gambling, and many of these states also run lotteries as well. One underlying rationale for establishing these operations, especially in the late sixties and early seventies was to redirect the flow of funds from gambling away from organized crime and illegal activity to a legal arenas. These activities were also viewed as another source of funding for state and local government entities. Pescatrice (1979; 1980A; 1980B) suggests that off track betting and other gambling or parimutuel wagering opportunities can be effective sources of additional government revenues.

Coate and Ross (1974; 1978) directly addressed some of the major issues that OTB presented for New York State and also for the racing industry. The takeout rate from total wagering handle on parimutuel wagering in New York State tracks was established at 17 percent, with the state receiving 10 percent, and the track keeping 7 percent. For OTB, the takeout rate remained at 17 percent, but the split was not conducted three ways, with the horse racing industry (tracks) receiving between 1 to 2 percent

depending upon the type of wagering instrument, tracks receiving 3 to 5 percent again depending on the type of wagering instrument, and the local government OTB corporation receiving 10 percent. The split on takeout creates one major potential source of conflict. Their analysis indicates that OTB resulted in a loss of revenue to both the state and the local race tracks, but an increase in revenues to NYC (Coate and Ross, 1974). The decline in track revenues arose from declining track attendance, which according to Coate and Ross (1978) occurred as some race patrons switched from track attendance to placing their bets at OTB facilities.

In their analysis of the impact of transportation costs on parimutuel wagering demand, Ali and Thalheimer (1997) find that consumers are sensitive to both travel costs and time costs. Their study looks in particular at New Jersey horse and harness racing tracks that also include simulcasting, but not OTB. They suggest that both attendance and revenue streams could be increased by reducing the costs per visit by several strategies including the number of racing days, reallocating the existing number of racing days to different locations, increasing the number of wagering sites or strategically relocating sites. In a later paper, Ali and Thalheimer (2002) develop an expanded multi-product demand model for wagering finding a number of interrelationships between wagering products and underlying demand characteristics including breed of racing, source (live or simulcast), and geographic location.

Stein and Mizzi (2003) examine the role of new or exotic wagers in the parimutuel markets. In particular they look at the continuing issue or problems associated with attracting new patrons as well as keeping existing clientele given the ever increasing availability of alternative opportunities to gamble, such as casinos. Race tracks have moved into offering ever more exotic instruments such as the twin trifecta, in which bettors have to select the top three horses in order in two specified races to win, or three exactas, the first two horses in three races in a row. Their analysis assesses expected payoffs from what is termed a grand slam, which involves selecting an exacta, trifecta, and a superfecta across three selected races. One of the goals of their analysis is to provide a means to evaluate the trade-offs of new wagering instruments in attracting and retaining customers given the potential carryover of portions of the betting pool, and the ability of bettors to win. They suggest that tracks face the problem that if it is too easy to win, parimutuel associations will not attract enough customers, while if it is too difficult to win, bettors will lose interest before the carryover pool grows large enough to make it profitable. Studies such as those by Gramm and Douglas (2006), find that simulcasting of races which also takes into account current trends in parimutuel wagering markets, has increased market efficiency.

Other studies such as those by Ray (1991) indicate that parimutuel racing may help to induce local or regional economic growth. Walker and Jackson (2007) on the other hand do not find strong evidence that the establishment of gambling facilities leads to economic growth.

Overall, it appears that OTB and other opportunities for gambling has reduced on-track attendance, and thus may have some effects on the race track and harness track industry. This has led over time to states such as New York making adjustments to the distribution of handle takeout, and imposing new taxes or fees on off track betting and simulcast facilities to redistribute to track and harness operators.

### 3. PRELIMINARY STATISTICAL AND ECONOMETRIC ANALYSIS

In many states, including New York, there has been the elimination of restrictions on various forms of gaming that includes various forms of casino gambling, and establishing and expanding state lotteries. Race and harness track operators, facing greater levels of competition have pushed as well to be allowed to engage in new gaming areas. Since its inception, total OTB revenues in nominal terms have grown from \$118 million in 1971 with only one OTB regional corporation to \$1.94 billion in 2007 with six OTB regional corporations. While this represents a 16 fold increase in revenues, in real terms OTB revenues hit their peak in 1979 and have slowly declined since (see Tables 1 and 2).

Year	Capital	Catskill	Nassau	NYC	Suffolk	Western	All Regions
1971.00	NA	NA	NA	118.59	NA	NA	118.59
1972.00	2.32	NA	NA	450.32	NA	NA	452.63
1973.00	11.41	NA	NA	691.28	NA	NA	702.69
1974.00	15.10	NA	NA	786.71	NA	13.44	815.25
1975.00	19.80	NA	NA	773.55	30.37	55.24	906.86
1980.00	102.67	73.98	142.57	879.64	117.25	146.49	1462.60
1985.00	157.72	106.08	155.09	871.87	140.67	143.30	1574.73
1990.00	234.81	115.88	214.67	961.47	197.05	199.84	1923.71
1995.00	214.68	130.49	220.13	854.46	177.06	184.05	1780.87
2000.00	222.47	139.03	252.04	1013.18	174.30	174.04	1975.06
2001.00	229.44	144.74	258.21	1014.63	186.82	176.32	2010.15
2002.00	225.38	144.62	264.30	1030.29	205.25	171.89	2041.72
2003.00	220.87	143.27	261.87	1025.07	211.48	159.91	2022.45
2004.00	212.24	143.12	299.36	1036.09	205.29	149.54	2045.63
2005.00	213.06	146.52	311.11	1046.42	199.05	145.40	2061.57
2006.00	209.92	143.03	307.67	1060.98	195.18	140.23	2057.02
2007.00	201.84	131.81	293.52	1030.20	188.16	139.44	1984.96

**Table 1: Nominal OTB Handle in millions**

Across the same time span, the overall population of the state grew from 18.3 million people to 19.29 million people (Table 2). This growth was by no means uniform, as certain parts of the state, particularly Western and Northern New York actually saw population declines, while NYC and the surrounding counties experienced increases. Over this same period, while nominal income shows an increase from \$5169 to \$46,664, or what appears to be a nine fold increase, in real terms, state per capita income increased by approximately 43 percent (Table 2). While a complete series for the time period on state tax revenues was not available, from 1992 to 2007, real sales and gross receipts tax revenues increased by approximately 20 percent (Table 3).

<b>Year</b>	<b>Capital</b>	<b>Catskill</b>	<b>Nassau</b>	<b>NYC</b>	<b>Suffolk</b>	<b>Western</b>	<b>All Regions</b>
1971	NA	NA	NA	607.36	NA	NA	607.36
1972	11.49	NA	NA	2233.25	NA	NA	2244.74
1973	53.27	NA	NA	3226.34	NA	NA	3279.61
1974	63.48	NA	NA	3307.54	NA	56.51	3427.52
1975	76.26	NA	107.49	2979.80	116.98	212.79	3493.32
1979	262.03	190.96	385.52	2387.57	311.79	381.45	3919.33
1980	258.40	186.20	358.81	2213.85	295.10	368.69	3681.04
1985	303.92	204.42	298.84	1680.05	271.06	276.14	3034.43
1990	372.61	183.89	340.66	1525.74	312.69	317.12	3052.71
1995	292.10	177.56	299.52	1162.62	240.92	250.43	2423.13
2000	267.88	167.41	303.48	1219.99	209.88	209.56	2378.22
2001	268.70	169.51	302.39	1188.27	218.79	206.49	2354.16
2002	259.81	166.71	304.67	1187.65	236.60	198.14	2353.58
2003	248.88	161.44	295.09	1155.09	238.30	180.19	2279.00
2004	232.94	157.08	328.56	1137.18	225.32	164.13	2245.22
2005	226.22	155.57	330.32	1111.03	211.34	154.38	2188.85
2006	215.92	147.12	316.46	1091.28	200.75	144.23	2115.76
2007	201.83	131.80	293.52	1030.17	188.15	139.43	1984.92

**Table 2: Real OTB Handle in millions**

The exact level of takeout and breakage from parimutuel handle varies on the basis of type of wager. Additionally, over the last thirty-seven years, New York State has levied additional fees to support the racing and harness industry. OTB takeout and breakage now averages approximately 20.5 percent of total net handle, with OTB corporations retaining approximately 50 percent of takeout, the tracks taking approximately 40 percent, the state taking approximately 7.5 percent, and 2.5 percent going to the Thoroughbred and Harness Breeders funds. In 2007 two OTB corporations operated at losses, NYC and Suffolk County.

The data used in this study come from several sources, including the New York State Racing and Wagering Authority which issues a public report annually on OTB and simulcast wagering including information on total racing handle, takeout, and payments to tracks and New York State authorities for the six OTB corporations. CPI, New York State population, per capita income, and data on state tax revenues come from databases maintained by the Bureau of Labor Statistics, the Bureau of Economic Analysis, and the St. Louis Federal Reserve.

<b>Year</b>	<b>Per Capita Income</b>	<b>Real Per Capita (2007dollars)</b>	<b>Population (1000s)</b>
1971	5169	26474	18357.982
1975	6972	26857	18003.485
1980	11015	27722	17566.754
1985	16877	32521	17791.672
1990	23523	37328	18002.855
1995	27082	36849	18150.928
2000	34901	42025	18996.571
2001	35640	41739	19076.61
2002	35416	40826	19132.542
2003	36107	40687	19207.652
2004	38423	42172	19258.479
2005	40942	43470	19262.545
2006	43898	45152	19281.988
2007	46664	46663	19297.729

**Table 3: Per Capita and Real Per Capita Income and Population**

<b>Year</b>	<b>Tax Revenues (1000s)</b>	<b>Tax Revenue (2007 dollars)</b>
1992	10658851	15751068
1993	11309933	16231192
1994	11595814	16220449
1995	11774157	16020477
1996	11913517	15747640
1997	12139863	15680294
1998	12422939	15801475
1999	12819740	15956247
2000	13307079	16023364
2001	13094014	15334881
2002	13120783	15124888
2003	15145453	17066621
2004	16478965	18086807
2005	17331254	18401274
2006	19212180	19760827
2007	19505685	19505246

**Table 4: New York State Sales and Gross Receipts Taxes**

Various analysts such as Coate and Ross (1974; 1978) and more recently Ali and Thalheimer (1997; 2002) have successfully used time series models and techniques to examine wagering markets. Ali and Thalheimer, for example, estimate an aggregate demand function (using a Hicksian demand function) for on track horse racing and harness wagering using time series data of the form:  $h = h(p_w, p_x, y)$ . The demand for wagering  $h$ , is a function of the  $p_w$ , the price of wagering,  $p_x$ , the price of other goods, and income,  $y$ . The price of wagering is not directly observable and so the takeout rate is generally used as proxy.

A complete series on takeout rates was not readily available for this study, thus limiting an analysis of wagering demand through OTB. Instead, OTB wagering is examined using a time series model for the six pooled regional corporations using an autoregressive structure. In particular, the following equation is estimated in log form:

$$(1) \text{ Net OTB Handle} = f(\text{constant, Net OTB Handle}_{t-1}, \text{population, per capita income, trend}).$$

The equation was estimated in first difference form in order to eliminate problems associated with non-stationarity found in some of the data, with a cross section trend variable included for each of the six regions. The results of the analysis are found in Table 5.

<b>Variable</b>	<b>Coefficient</b>	<b>t-statistic</b>
Constant	0.0217	(1.33)
Handle (-1)	0.1931**	(7.03)
Population	-0.9008	(-1.21)
Per capita income	0.6692**	(2.55)
Capital <sub>trend</sub>	-0.0013	(-1.58)
Catskill <sub>trend</sub>	-0.0016*	(-2.03)
Nassau <sub>trend</sub>	-0.0001**	(-1.56)
NYC <sub>trend</sub>	-0.0020**	(-2.39)
Suffolk <sub>trend</sub>	-0.0017*	(-2.08)
Western <sub>trend</sub>	-0.0022**	(-2.63)
Adj R <sup>2</sup>	0.325	
F	11.31**	

**Table 5: Dependent variable - Net OTB Handle**

The coefficient estimates are consistent with those of previous studies. While there is a positive association OTB handle with income, betting at OTB facilities throughout the state has trended downward. During the period ending in 2007, two regional corporations reported net losses, NYC and Suffolk county. Net revenues from the six regions including the portion of takeout and breakage to the state, the reserve for uncashed tickets, and regulatory fees totaled approximately \$30 million, an almost insignificant amount when compared to the \$19 billion in sales and gross receipts taxes collected in 2007.

#### 4. CONCLUSIONS

While nationally wagering on horse and harness racing appears to have increased, in New York, in real terms, wagering as shown through OTB data has actually declined across the state. Preliminary time series analysis of the data indicates that this trend is continuing. In terms of the financial viability of OTB across the state, already regions such as NYC and Suffolk County are suffering losses on their OTB operations. While NYC has encountered this situation in the past, and despite new agreements with the state regarding the NYC OTB operation, its financial health in the city and even the whole state is in question.

While data availability limited the scope of this current study more work still needs to be conducted in this area. The gaming industry has grown over the last forty years, and the expansion of off track betting and simulcasting has been an important part of this growth across the country, and will continue to be in the future.

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