

Kentucky Parimutuel Revenue Policy Simulator

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Abstract

Since Kentucky introduced inter-track wagering in 1988, and inter-state wagering in 1994, there has been an ongoing substitution of declining live handle with increasing simulcasting handle. Also, since 1995 there has been a marked increase in competition from alternative gaming. At issue is the net effect on parimutuel stakeholder revenue relative to changes in the distribution of parimutuel handle and increased competition. This paper presents a parimutuel revenue budget that can be used to evaluate the marginal revenue of changes in policies, or of actions taken in response to increased competition from alternative gaming. **Key Words:** *parimutuel handle. Thoroughbred, Kentucky, simulcast wagering*

Introduction

Kentucky has one of the strongest parimutuel gaming markets in the country. Although by state it ranks sixth in total parimutuel handle, it ranks first in per-capita-wagering at \$170, followed by New Jersey at \$151 and New York at \$146. A primary source of revenue for the Thoroughbred industry is parimutuel wagering. Kentucky's parimutuel horse racing markets have recently experienced a rapid expansion in competition from alternative gaming. Since 1995, four riverboat casinos have initiated operation on the Ohio River, and they compete directly in Kentucky parimutuel gaming markets. Figure 1 identifies the location of Kentucky's horse racing tracks, off-track betting sites, and competitive riverboat casinos.

The negative substitution effect of increased wagers at competitive gaming facilities and decreased parimutuel handle is readily apparent (Thalheimer, 1998; Ali and Thalheimer, 1997). The competitive effects of introducing alternative gaming into parimutuel markets include reduced parimutuel handle, reduced attendance revenues, and increased track expenditures on marketing and competitive strategies to mitigate the effects of competitive gaming. Although decreased parimutuel handle is readily apparent from introducing competitive gaming into a regional mar-

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ket, the net effects of changes in parimutuel handle on stakeholder (horsemen, tracks and state taxes) revenue are not apparent due to the complexity of statutes regulating parimutuel handle distribution. A computer aid is needed to analyze potential revenue effects in response to increased alternative gaming competition and to analyze potential policies affecting the distribution of parimutuel revenue.

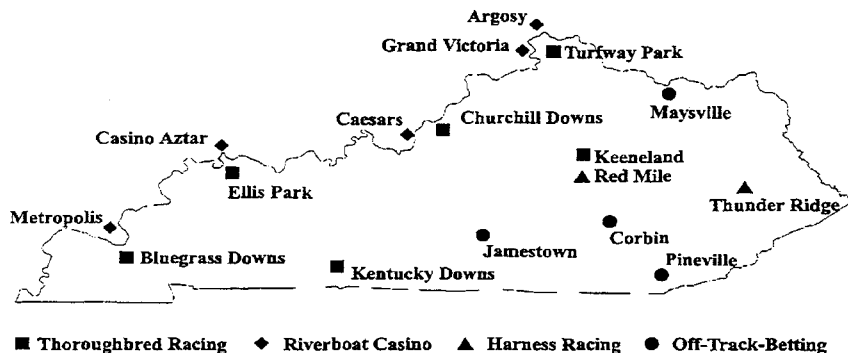


Figure 1. Location of Kentucky Parimutuel Wagering Facilities and Competitive Riverboats

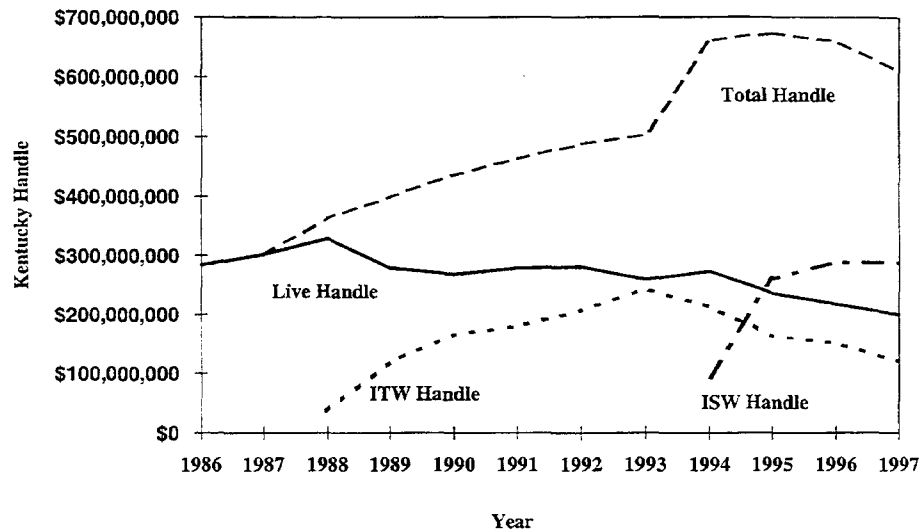
Cummings (1996) wrote that horse racing industry stakeholders need cooperation, intelligence, and foresight in politics and policy-setting to position racing as a desirable gaming choice. The purpose of this paper is to present a revenue budget simulation tool that can provide policy-setting foresight in Kentucky and in other states considering policies affecting the distribution of parimutuel revenue.

Background and Handle Sources

Since the introduction of simulcasting into Kentucky in 1988, the composition of parimutuel handle and the resulting revenue distribution have increased in complexity. Kentucky parimutuel handle sources now include: (1) live racing, (2) inter-track wagering (ITW) of Kentucky races at an in-state race track or off-track betting (OTB) wagering site, (3) inter-state wagering as a Kentucky host¹ track simulcasting its signal across state lines (ISW-S), and (4) inter-state wagering as a Kentucky wagering site receiving an out-of-state simulcasting signal (ISW-R). The distribution of parimutuel handle to parimutuel stakeholder revenue depends on statutes stipulating take-out rates, excise taxes, the revenue distribution schedules for simulcasting handle sources, and the contractual splits to purses negotiated between the association representing horsemen and each track. Since simulcasting wagering was introduced, there has been an ongoing substitution of simulcast handle for live handle (see Figure 2).

Since its introduction into Kentucky in 1988, ITW handle peaked at \$242 million in 1993. It has currently declined to \$121 million in response to introducing ISW-R wagering into Kentucky in 1994. Since 1994, ISW-R handle has grown rapidly and reached \$289 million in 1997. Although total parimutuel handle has

increased over the time frame shown in Figure 2, the net effect on Kentucky's parimutuel revenue stakeholders from changes in the distribution of handle is not readily evident, due to the differential splits of revenue to stakeholders by handle type.



Source: Kentucky Racing Commission

Figure 2. Trends In Kentucky Handle 1986 to 1997.

Total 1997 handle and revenue generated at Kentucky parimutuel facilities and competitive riverboat casinos are presented in Table 1. Kentucky's total parimutuel handle was \$609.6 million, a decline of 7.5 percent from 1996. In comparison, each competitive riverboat casino generated at least twice this level of wagering individually. Kentucky's total parimutuel stakeholder revenue in 1997 was \$107.0 million, a decline of 8.4 percent from 1996. The decline is primarily attributable to the 34.6 percent decline in parimutuel wagering from 1996 at Turfway Park, which faced a full year of competition from two Indiana riverboats, Grand Victoria and Argosy Casinos. The win at each of these riverboats was more than Kentucky's total parimutuel revenue.

In 1997, forty-three percent of total Kentucky parimutuel handle was wagered in the Louisville gaming market at Churchill Downs. Given Kentucky's revenue sharing distribution schedule, the Louisville gaming market is important to all parimutuel stakeholders in Kentucky. Churchill Downs has yet to compete directly with a riverboat, but that is likely to change when Caesars initiates operation of its awarded riverboat license in the fall of 1998 (Melnykovich, 1998).

Table 1
Kentucky Parimutuel and Competitive Riverboat Gaming Wagering Levels

Facility	Amount Wagered (Handled) 1997 ¹	% Change From 1996	Take-Out/Win Revenue 1997 ²	% Change From 1996
	\$ millions	%	\$ millions	%
Parimutuel Horse Racing				
Bluegrass Downs	11.1	3.1	2.0	2.5
Churchill Downs	264.7	3.5	45.5	2.9
Ellis Park	53.2	2.1	9.8	1.1
Keeneland	101.1	7.2	17.2	6.2
Kentucky Downs ³	27.3	-7.2	4.9	-7.5
Red Mile	11.4	-51.7	2.4	-49.6
Thunder Ridge	11.7	2.7	2.2	1.3
Turfway Park	94.8	-34.6	17.3	-34.5
OTBs	34.3	-6.0	6.4	-6.5
<i>Total Kentucky</i>	<i>609.6</i>	<i>-7.5</i>	<i>107.0</i>	<i>-8.4</i>
Riverboat Casinos Competing In Kentucky's Parimutuel Gaming Markets⁴				
Casino Aztar	1,191.9	5.6	106.9	0.8
Grand Victoria Casino	1,766.2	N/A ⁵	142.9	N/A ⁵
Argosy Casino	1,413.8	N/A ⁵	128.9	N/A ⁵
Players' Riverboat Casino	1,124.6	2.7	76.7	0.1
<i>Total Competitive Riverboats</i>	<i>5,496.5</i>	<i>--</i>	<i>455.4</i>	<i>--</i>

¹ Parimutuel handle is the total amount wagered on live, ITW and ISW-R. For riverboats the amount wagered represents the drop on table games plus the coin in slot machines.

² Take-out and win is the revenue extracted from gamblers for taxes and gaming operations.

³ Formally known as Dueling Grounds.

⁴ Casinos Aztar, Grand Victoria, and Argosy, are located in Indiana. Caesars Casino is also located in Indiana, but is not expected to initiate operations until fall, 1998. Players' Riverboat Casino is located in Metropolis, Illinois.

⁵ Grand Victoria and Argosy Casinos did not operate a full year in 1996. They opened Oct. 4, 1996 and Dec. 13, 1996, respectively.

Source: Kentucky Racing, Indiana Gaming and Illinois Gaming Commission Reports.

Revenue Distribution From Sources of Handle

Parimutuel wagering is the economic engine driving the Thoroughbred industry in Kentucky, by providing revenue for track operation, horsemen purses, and state taxes. At issue is the changing distribution in handle which in turn changes the revenue distribution to parimutuel stakeholders. The revenue distribution is dependent on several factors based on the size of the host track and wager type (straight one horse wagers, or multiple horse exotic wagers). The take-out rates, (the maximum percent commission withheld from the parimutuel pool) and excise tax rates² differ by track size and wager types. Kentucky tracks are classified as large and small tracks. A large track has a daily average live racing handle of \$1.2 million dollars or above (KRS 138.510.1). A small track would have a daily average live racing handle below this figure. Large tracks have a maximum take-out rate including breakage and excise tax of sixteen percent on straight wagers, and nineteen percent on exotic wagers. Small tracks have a maximum take-out rate including breakage and excise tax of 17.5 percent on straight wagers, and twenty-two percent on exotic wagers (KRS 230.3615). Breakage is the rounding off of the pay-off for winning tickets. Kentucky's breakage is calculated to the dime (KRS 230.3615).

Revenue Distribution Schedules

The revenue distribution for live and ISW-S handle is based on a contractual agreement negotiated between the horsemen's association and each track. Kentucky statutes dictate a revenue distribution schedule for ITW and ISW-R handle. Table 2 presents Kentucky's revenue distribution schedule across stakeholders for each source of handle. Kentucky's average contractual split of the net commission (the take-out net of excise taxes) revenue between horsemen and tracks on live handle is 55 and 45 percent, and on ISW-S is 56 and 44 percent.³ The ITW net commission revenue distribution schedule is regulated by Kentucky statute and is 34 percent to the host track, with 22 percent each to the host track's purse account, the receiving track, and the receiving track's purse account. The host track's 34 percent includes an additional twelve percent to recover simulcasting costs (KRS 230.378.3). The revenue distribution schedule for ISW-R handle is 25 percent of net commission to each stakeholder (KRS 230.3771.1).

Wagers placed at OTB sites have a different revenue distribution schedule. For both ITW and ISW-R wagers the net commission is distributed 30 percent to the host track, 50.5 percent to the host track purse account, 13.5 percent for OTB management, and 6 percent for Thoroughbred industry promotion and development (KRS 230.380.9a). Combining the information previously discussed concerning take-out rates, excise taxes and the revenue distribution schedule presented in Table 2, stakeholder revenue generated from \$100 wagered in each handle source can be calculated and is presented in Table 3.

Table 2
Kentucky Revenue Distribution Schedule

Stakeholder	Handle Source				
	Live ¹	ITW	ISW-R	ISW-S ¹	OTB ITW/ISW-R
	% of Net Commissions ²				
Host Track	45	34	25	56	30
Host Track Purses	55	22	25	44	50.5
Receiving Track		22	25		
Receiving Track Purses		22	25		
Other ³					19.5

¹ The revenue distribution for live and ISW-S is based on a negotiated contract between horsemen associations and tracks. The distribution schedule given is based on average contractual terms in Kentucky.

² Net commission is the take-out net of excise taxes and for ISW-R the contractual cost of receiving the ISW-R signal.

³ Other represents 13.5% to OTB management and 6% to Kentucky Thoroughbred owners and Breeders for Thoroughbred industry promotion.

Table 3
Kentucky Revenue Distribution From \$100 In Source of Parimutuel Handle

Handle Source	Large Host Track ¹			Small Host Track ¹		
	Horsemen Revenue ²	Track Revenue	Net Tax Revenue ³	Horsemen Revenue ²	Track Revenue	Net Tax Revenue ³
Live						
Live - Straight Wager - On Track	7.62	5.63	2.75	9.55	7.20	0.75
Live - Exotic Wager - On Track	9.27	6.98	2.75	12.02	9.23	0.75
ITW⁴						
ITW - Straight Wager - Track	7.72	7.28	1.00	8.38	8.12	1.00
ITW - Exotic Wager - Track	9.04	8.96	1.00	10.36	10.64	1.00
ITW - Straight Wager - OTB	7.58	4.50	1.00	8.33	4.95	1.00
ITW - Exotic Wager - OTB	9.09	5.40	1.00	10.61	6.30	1.00
ISW-R^{4,5}						
ISW-R - Track	8.76	6.76	1.00	9.01	7.01	1.00
ISW-R - OTB	10.01	4.69	1.00	10.01	4.69	1.00
ISW-S⁶						
Handle Wagered Outside Kentucky	1.68	1.32	0.00	1.68	1.32	0.00

¹ The host track determines the take-out rate, 16 and 19 percent for large tracks and 17.5 and 22 percent for small tracks for straight and exotic wagers, respectively.

² Using Kentucky's average contractual split of 55-45 for live and 56-44 for ISW-S, plus breeder/owner incentive payments.

³ Tax revenue is net of breeder/owner incentive payments required per KRS 138.510.1.

⁴ Revenue distribution for ITW and ISW-R per KRS 230.378.3 and KRS 230.3771.1, see Table 2.

⁵ Revenue distributions based on average net commissions - Kentucky Racing Commission, Forty-Sixth Biennial Report.

⁶ A contract rate of three percent is assumed between the Kentucky host track and the out of state receiving site.

Horsemen Purse Revenue

Regardless of the source of handle in Kentucky, horsemen purse revenue is greater than track revenue. Horsemen receive a larger revenue distribution share, plus horsemen receive breeder/owner incentive funds which are transfer payments from the state's parimutuel tax revenue to horsemen. Established in 1978, the Kentucky Thoroughbred Development Fund (KTDF) incentive program is a purse supplement to provide economic incentives to board and breed broodmares and stallions in Kentucky, and then to race the Kentucky-bred horses at Kentucky tracks. The KTDF receives \$0.75 per \$100 of live handle, and \$2.00 per \$100 of ITW and ISW-R handle. Including incentive payments, for each \$100 wagered, horsemen purse revenue ranges from \$7.62 to \$12.02 on live racing, \$7.72 to \$13.44 on ITW, and from \$8.76 to \$10.01 on ISW-R (see Table 3).

Although wagering at Kentucky OTBs is a small percent of total handle, the distribution of the take-out allocated to horsemen is relatively large. Two reasons account for the large distribution. First, OTBs are assessed only a one percent excise tax in comparison to the three percent excise tax levied on ITW and ISW-R handle wagered at a track, and the relatively large split of net commission to purses of 50.5 percent (see Table 2). As noted, while wagers at OTBs represent a large revenue distribution to horsemen, the OTBs account for only six percent of total horsemen purse revenue due to the relatively small amount wagered at the OTBs.

The lowest split of handle to purses comes from handle generated by a Kentucky track simulcasting its signal out of state, ISW-S. The handle from this source varies dependent on the simulcasting contract fee negotiated between the Kentucky host track and the out of state receiving site. The purse contribution from this revenue source also varies because it is dependent on the contractual split negotiated between the track and horsemen. The \$1.68 purse contribution from ISW-S is based on a three percent simulcasting fee between the track and the out of state receiving site, and an average 56 percent contractual split between horsemen and tracks in Kentucky. A three percent simulcasting contract fee for ISW-S is common across the industry (National Thoroughbred Association, 1996).

When considering purses alone, net of breeder/owner incentive payments, the greatest source of purse funds is from live racing and ranges from \$6.87 to \$11.27 per \$100 of handle dependent on track size and wager type.⁴ Based on the data given in Table 3, to replace the purse contribution at the host track from a dollar lost in live on-track handle requires an increase of about \$2.56 in ITW handle, \$2.86 in ISW-R handle, or \$5.28 in ISW-S handle.

Track Revenue

Tracks are large capital assets with high fixed and operating costs for live racing, but have low marginal costs for additional betting patrons. Using track facilities for ITW and simulcast wagering increases the efficiency of track operation and provides additional revenue for management. Sources of parimutuel revenue for track management are the same as those for horsemen, with the exceptions that the revenue distribution schedules are different and tracks do not receive

breeder/owner incentive payments. The largest distribution of revenue from handle source for Kentucky tracks is from ITW exotic wagers, \$8.96 and \$10.64 for large and small tracks, respectively. This revenue distribution is split between the host track and the receiving track where the wager is made. Thirty-four percent of the net commission goes to the host track and 22 percent to the receiving track. The balance goes to horsemen purses. The host track receives a larger split to cover the cost of simulcasting the race signal (KRS 230.378.3). For example, the \$8.96 track revenue distribution from \$100 in ITW exotic wager with a large host track would be split: \$5.44

to the host track and \$3.52 to the receiving track. The associated \$9.04 horsemen revenue comes from \$3.52 for purses at the receiving track, \$3.52 for purses at the host track, plus \$2.00 of transfer payments from the state for breeder/owner incentive payments.

For an individual host track, the greatest source of parimutuel revenue is generated from live racing followed by ISW-R handle wagered at the host track, because the host track does not share these handle sources with other tracks. The host track does not share its ISW-S handle, but that represents the lowest revenue distribution per \$100 in handle. Although ISW-S revenue is low, it represents a growing source of handle for tracks as they market their signal out of the state. ISW-S handle has grown rapidly in Kentucky over the past two years and has largely contributed to maintaining track and horsemen revenue as handle on live racing and ITW has declined.

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Tax Revenue

The state receives tax revenue on live, ITW and ISW-R handle. The tax on live racing is 3.5% and 1.5% of gross handle at large and small tracks respectively. The tax on ITW and ISW-R is 3% of gross handle for wagers placed at tracks and 1% of wagers placed at OTBs. The state transfers much of this revenue to horsemen in the form of breeder/owner incentive payments. For each \$100 in live racing handle the state transfers \$0.75, and for each \$100 in ITW and ISW-R handle the state transfers \$2.00 to breeder/owner incentive payments. Wagers at OTB facilities are assessed \$1 for each \$100 in handle for local economic development. State revenue from parimutuel handle net of breeder/owner incentive payments totaled \$9.3 and \$8.7 million in 1996 and 1997, respectively. This revenue is in turn used to support the parimutuel industry through funding the Kentucky Racing Commission and other supportive programs.

Revenue Budget Distribution Policy Simulation Tool

A revenue budget policy simulator has been developed using the revenue distribution per handle source as previously described in Table 3, augmented to include the actual contract terms and handle distribution by wagering site. Table 4 presents the revenue budget by handle source and wagering site in 1997, and shows total stakeholder revenue to be \$107.0 million dollars. The budget is verified against Kentucky Racing Commission reports. The budget does not include ISW-S sending handle, because this handle source is not reported to the Kentucky Racing Commission, and individual tracks would not release this proprietary information. The lack of ISW-S handle does not materially impact the analysis, because this handle source does not have a revenue sharing schedule. Also, Kentucky cannot tax and has no policy input on handle generated outside of the state.

Table 4
Kentucky Thoroughbred Parimutuel Revenue Budget Simulator, 1997 Handle Levels

Source of Handle (\$)	Bluegrass Downs	Churchill Downs	Kentucky Downs	Ellis Park	Keeneland	Red Mile	Thunder Ridge	Turfway Park	KOTB	Total
Live On-track	350,741	118,016,354	0	17,215,355	36,832,255	2,227,210	286,348	24,347,225	0	199,275,488
ITW	3,618,917	43,337,102	8,217,097	12,667,534	18,558,060	7,321,375	2,901,223	14,061,263	10,431,748	121,114,319
ISW-R	7,159,087	103,367,983	19,103,559	23,286,323	45,690,698	1,831,945	8,513,818	56,392,233	23,833,927	289,179,573
Total Handle	11,128,745	264,721,439	27,320,656	53,169,212	101,081,013	11,380,530	11,701,389	94,800,721	34,265,675	609,569,380
Horsemen Revenue (\$)										
Purses										
Live	32,322	8,826,517	0	1,556,152	4,357,827	225,294	26,768	2,250,044	0	17,274,924
ITW	274,654	2,831,753	620,850	956,317	1,203,084	621,525	213,726	1,053,890	952,278	8,728,077
ISW-R	487,343	6,910,613	1,345,007	1,589,110	3,040,391	133,158	598,856	3,955,552	1,685,908	19,745,938
Sub-Total Purses	794,320	18,568,883	1,965,858	4,101,579	8,601,302	979,977	839,350	7,259,485	2,638,187	45,748,940
Breeder/Owner Incentives (KTDF)										
Live	2,631	885,123	0	129,115	276,242	16,704	2,148	182,604	0	1,494,566
ITW	72,378	866,742	164,342	253,351	371,161	146,428	58,024	281,225	0	2,213,651
ISW-R	143,182	2,067,360	382,071	465,726	913,814	36,639	170,276	1,127,845	0	5,306,913
Sub-Total KTDF	218,191	3,819,224	546,413	848,192	1,561,217	199,770	230,448	1,591,674	0	9,015,131
Total Horsemen Revenue	1,012,510	22,388,107	2,512,271	4,949,771	10,162,519	1,179,748	1,069,798	8,851,159	2,638,187	54,764,071
Track Revenue (\$)										
Live	32,322	7,858,770	0	1,581,252	769,028	225,294	26,768	2,223,204	0	12,716,639
ITW	274,654	2,831,753	620,850	956,317	1,203,084	621,525	213,726	1,053,890	565,710	8,341,509
ITW Simulcasting Fcc	74,906	772,296	169,323	260,814	328,114	169,507	58,289	287,424	0	2,120,672
ISW-R	487,343	6,910,613	1,345,007	1,589,110	3,040,391	133,158	598,856	3,955,552	1,001,530	19,061,560
OTB Management	0	0	0	0	0	0	0	0	705,258	705,258
KTOB Promotion Fund	0	0	0	0	0	0	0	0	313,448	313,448
Total Track - OTB Revenue	869,225	18,373,432	2,135,180	4,387,492	5,340,618	1,149,484	897,639	7,520,070	2,585,945	43,259,086
State Excise Tax Revenue - net of breeder/owner incentives (\$)										
Live	2,631	885,123	0	129,115	276,242	16,704	2,148	182,604	0	1,494,566
ITW	36,189	433,371	82,171	126,675	185,581	73,214	29,012	140,613	0	1,106,826
ISW-R	71,591	1,033,680	191,036	232,863	456,907	18,319	85,138	563,922	0	2,653,456
Local Economic	0	0	0	0	0	0	0	0	342,657	342,657
Development										
Total State Excise Tax Revenue	110,411	2,352,174	273,207	488,654	918,729	108,237	116,298	887,139	342,657	5,597,505
Breakage (\$)	71,292	1,112,814	145,411	358,918	722,841	93,773	75,069	565,150	202,710	3,347,979
Total Stakeholder Revenue (\$)	2,063,439	44,226,526	5,066,069	10,184,835	17,144,708	2,531,241	2,158,805	17,823,519	5,769,498	106,968,640

To illustrate applications of the revenue budget, the following examples are analyzed: (1) the revenue effects from Keeneland's change in size classification; (2) the revenue effects of Ellis Park's change in handle distribution relative to the

introduction of alternative gaming competition; and (3) a range of potential revenue effects from introducing alternative gaming competition into the Louisville gaming market are estimated.

Keeneland's Change In Size Classification

The trend of declining live handle has affected all Kentucky tracks. As previously discussed, live racing handle is the greatest revenue source for individual tracks and horsemen purses. Keeneland's decline in average daily live racing handle from \$1.29 million in 1996 to \$1.15 million in 1997 has additional implications, because the handle decline changes Keeneland's size classification from a large track to a small track. The size change decreases the excise tax rate on live racing levied against Keeneland from 3.5 to 1.5 percent, and allows Keeneland to increase the take-out rates by 1.5 and 3.0 percent for straight and exotic wagers, respectively. The increase in take-out rates affects not only the revenue distribution on live racing, but also affects the revenue distribution for ITW wagering across the state. Using 1997 handle levels, the stakeholder revenue effects from Keeneland's size change are estimated in Table 5.

Table 5
Estimated Affect On Stakeholder Revenue From Keeneland's Change In Size Classification, 1997 Handle Levels

Stakeholder	Revenue Effect Live Handle ¹	Revenue Effect ITW Handle ²	Total Revenue Effect
Horsemen Purses	1,552,848	368,929	1,921,777
Track Management	274,032	553,393	827,425
State Taxes	-736,645	0	-736,645
Total Net Effect	1,090,235	922,322	2,012,557

¹ Assumes Keeneland's ongoing practice of splitting over eighty percent of net commissions on live racing to horsemen.

² Based on ITW revenue distribution statute KRS 230.378.3.

The state loses \$736,645 in tax revenue on live racing, but horsemen and Keeneland gain additional revenue on live racing of \$1,552,848 and \$274,032 from the decreased tax and increased take out rates. The disproportionate revenue increase for horsemen purses is due to Keeneland's ongoing practice of giving more than eighty percent of net commissions on live racing to horsemen. The

revenue effects from ITW handle are not as large because there is no tax change, and due to Keeneland's relatively short meet of only 36 days, the ITW handle Keeneland generates is relatively small. Based on Keeneland's 1997 ITW handle, the increased take-out rates increase horsemen revenue by \$368,929 and track revenue by \$553,393. Although Keeneland's change in size classification results in an estimated total increase in net revenue to parimutuel stakeholders of over \$2 million dollars, it comes at the expense of parimutuel bettors through increased take-out rates and decreased state tax revenues.

Ellis Park Net Revenue Distribution

Since the introduction of competitive alternative gaming at Casino Aztar, parimutuel handle wagered at Ellis Park has decreased from \$55.8 to \$53.2 million dollars, a decline of 4.7 percent. Compounding the competitive effect is a shift in the distribution of handle from live and ITW wagering to ISW-R wagering. Comparing the year-end handle distribution prior to alternative gaming competition in 1995 to the handle distribution two years post introduction of alternative gaming competition in 1997 shows that live racing handle fell 13.2 percent, ITW handle fell 24.8 percent, and ISW-R handle increased 21.6 percent. Table 6 presents the results from the revenue budget policy simulator analyzing the revenue effects from Ellis Park's change in handle distribution.

Table 6
Stakeholder Revenue Effects From Ellis Park's Change In Handle Distribution
(1995 to 1997)

Handle Source	Change	Revenue Effects (\$)			
	1995 - 1997	Horsemen	Tracks	State	Total
Live	-13.2	-255,971	-240,173	-19,611	-515,755
ITW	-24.8	-398,195	-400,652	-41,699	-840,546
ISW-R	+21.6	+365,283	+282,492	+41,396	+689,171
Net Revenue Distribution		-288,883	-358,333	-19,914	-667,130

The change in handle distribution results in an annual \$667,130 loss in stakeholder revenue. Kentucky tracks have the greatest stakeholder loss of \$358,333 in revenue stemming primarily from the decline in ITW handle. Tracks lose both revenue share and simulcasting fees from the decline in ITW handle. Ellis Park shares its ITW and ISW-R handle through the revenue distribution schedule as

previously discussed, but the loss in track revenue from live racing of \$240,173 is a direct loss to Ellis Park's management. The revenue loss is in addition to increased expenditures on marketing Ellis Park incurred to mitigate the negative effects of competitive gaming. Ellis Park's horsemen lose \$288,883 in purses and breeder/owner incentive funds due to the change in handle distribution. Although ISW-R handle increases, its lower revenue distribution is not enough to offset the decline in revenue from decreases in live and ITW handle sources.

Effects of Competitive Gaming In the Louisville Parimutuel Market

Another application of the parimutuel revenue budget simulator is to estimate potential revenue effects of introducing competitive gaming in the Louisville parimutuel market. Currently, Churchill Downs is the only Kentucky track located along the Ohio river that is not in direct competition with a river-boat casino. That is likely to change when Caesars initiates operation of its awarded license, which is expected to occur in the fall of 1998 (Melnykovich, 1998). It is hard to estimate the potential competitive effect of introducing alternative gaming into the Louisville parimutuel market, because of the unique demand for parimutuel wagering in Kentucky, the high quality of Churchill Downs horse racing product, and changing trends in the demand for parimutuel wagering products from live and ITW to ISW-R. Also, Churchill Downs initiated marketing campaigns in 1997 to improve fan amenities and awareness of its racing product. In comparison to other Kentucky tracks facing alternative gaming competition, total handle at Turfway Park in 1997 declined 34.5 percent, and as previously discussed, the total handle at Ellis Park decreased 4.7 percent since the introduction of competitive gaming into its market.

To evaluate the potential handle loss at Churchill Downs from alternative gaming competition at Caesars Casino two scenarios are compared to Churchill Downs 1997 handle distribution. A best case scenario is developed by using the change in handle distribution experienced by Ellis Park in response to competitive effects from Casino Aztar (live handle -13.2%, ITW handle -24.8%, and ISW-R+21.6%). A worst case scenario is developed by using the change in handle distribution experienced by Turfway Park relative to the introduction of competitive gaming at the Grand Victoria and Argosy Casinos and competition from the introduction of full card simulcasting in Ohio.⁵ Turfway Park's change in handle distribution is a decrease of 27.1% in live handle, a decrease of 38.2% in ITW handle, and a decrease of 34.6% in ISW-R handle. Total stakeholder revenue for each scenario, and the loss in stakeholder revenue from the 1997 baseline are presented in Figure 3. The bar in the chart represents stakeholder revenue.

The Ellis Park scenario results in relatively minor losses to stakeholder revenue. The state loss is only \$1,038, the tracks lose \$438,469 and horsemen lose \$259,921. In this scenario, the losses in stakeholder revenue from the decline in live and ITW handle are recovered through the increase in ISW-R handle. In comparison, the Turfway Park scenario has decreases in all handle sources, and results in substantial revenue losses to all stakeholders. The state loss is \$782,710, the tracks lose \$6,028,847 and horsemen lose \$7,321,639. While the exact effect of introducing competitive gaming into the Louisville market is difficult to estimate without a

detailed statistical analysis, the two scenarios presented in this analysis are likely boundary points of potential stakeholder revenue loss.

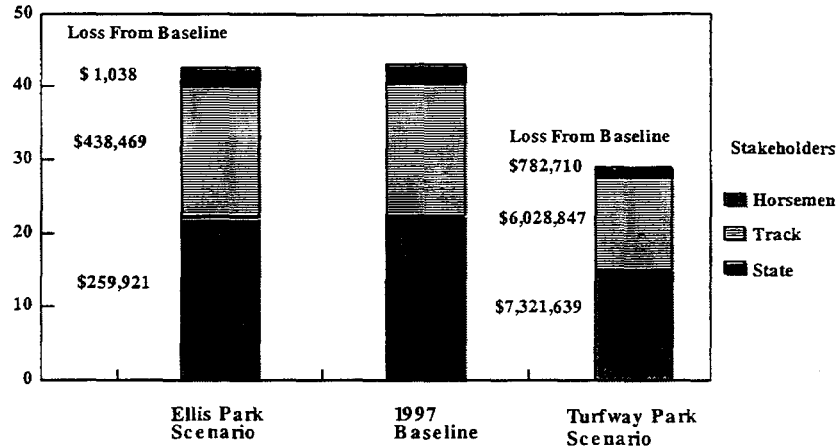


Figure 3. Stakeholder Revenue In Millions \$

Conclusions

Alternative gaming offered by riverboat casinos is a substitute for parimutuel wagering. The introduction of alternative gaming competition from Indiana and Illinois into Kentucky's parimutuel markets has resulted in reduced parimutuel handle. Since introducing competitive gaming into the Ellis Park market, their handle has fallen and the distribution changed resulting in a revenue loss to Kentucky's parimutuel stakeholders of \$667,130. Turfway Park handle has dropped 34.5 percent since two competitive riverboat casinos entered its market. Kentucky is at odds on how to respond to the increased competition. Some would like to see alternative gaming offered at Kentucky's parimutuel facilities, with alternative gaming revenues subsidizing tracks and horsemen. Others would like to see improved marketing for parimutuel products, and the expansion of the ISW-S market internationally, and to in-home wagering markets.

Kentucky's parimutuel revenue distribution schedule is complex because of the variable revenue splits across tracks and handle sources. The purpose of this study was to develop a parimutuel revenue budget simulation tool to calculate the revenue effects from changes in policies and competition affecting parimutuel handle. This simulation tool was used to illustrate the revenue effects of alternative policies affecting Kentucky's parimutuel revenue sharing schedules. The revenue budget reveals that the ongoing substitution of live and ITW handle for ISW-R results in a revenue loss to parimutuel stakeholders. Kentucky's parimutuel revenue distribution schedule provides horsemen with a greater share of revenue than the tracks receive, because horsemen revenue includes both purses and breeder/owner in-

centive payments. Horsemen are at greater risk for decreases in parimutuel handle than tracks, due to their larger revenue share. Horsemen need to take this into account in negotiations on policies affecting the distribution of parimutuel revenue.

The budget simulation tool was applied to analyze the revenue effects from Keeneland's change in size classification, the change in handle distribution at Ellis Park relative to the introduction of competitive alternative gaming, and to illustrate potential stakeholder revenue effects from introducing competitive alternative gaming in the Louisville gaming market on Churchill Downs. Along with other reforms and initiatives, efficient fiscal management is necessary to counteract declining parimutuel handle. The stakeholder revenue budget developed in this paper provides an efficient method to evaluate a wide variety of scenarios which will continue to occur in Kentucky's rapidly changing parimutuel market.

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Endnotes

1. A host track is the Kentucky track conducting live racing. A host track receives a share of ITW and ISW-R handle wagered at receiving tracks and OTBs. The host track determines the take-out rate for ITW wagering (KRS 230.378.2). In the case of overlapping live racing dates between tracks, the track with the largest daily handle in the preceding year, shall be declared the host track (KRS 230.3771.1e).
2. The excise tax on live racing handle is 3.5% for large tracks and 1.5% for small tracks (KRS 138.510.1). The excise tax is 3% for ITW and ISW-R wagering for both large and small tracks (KRS 138.510.2). The excise tax is 1% for ITW and ISW-R wagering at OTBs (KRS 230.380.8).
3. The averages are based on the written contractual terms between horsemen associations and tracks. Keeneland is unique because it transfers to horsemen purses more than the contractual terms. Historically, this transfer to purses is more than eighty percent of net commissions from live and ISW-S handle.

4. This range reflects net of incentive payments a straight wager at a large track (\$7.62 - 0.75) to an exotic wager at a small track (\$12.02 - 0.75).
5. In addition to gaming competition from the riverboat casinos, Ohio introduced full card simulcasting. Therefore, bettors did not have to commute to Turfway Park to wager, and this has been identified as a factor in Turfway Park's decline in handle.

