The Economics of Restoring Live Horse Racing and Greyhound Racing in Kansas

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by

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Not many people know that Kansas is considered the premier greyhound breeding state in the nation. More surprisingly still, Abilene, Kansas—normally thought of as "the Queen of Cowtowns"—is the hub of greyhound breeding activity in Kansas. Abilene hosts the National Greyhound Association and the Greyhound Hall of Fame—and is the location of two annual auctions for champion greyhounds. Dickenson County (where Abilene resides) is home to at least 35 percent of the states greyhound breeders.

Economic development professionals in every state seek to identify or build so-called economic "clusters." Greyhound breeding in Abilene is a natural cluster—one whose longevity will be strengthened by the restoration of greyhound racing in the state of Kansas.[1]

In the context of rural economic development, the region around Greenwood County, Kansas may also form the basis of a modest horse racing cluster. Greenwood County is home to the 144-year-old Eureka Downs racetrack. As discussed below, Greenwood and surrounding counties host (in relative terms) some of the largest horse populations in the state.

These clusters have atrophied since the loss of racing in 2008, but they can be quickly rehabilitated with the return of live racing. Just before the Great Recession hit Kansas, the state hosted four racetracks. The Woodlands, Eureka Downs, and Anthony Downs ran horse races. The Woodlands and the Wichita Greyhound Park ran greyhound races.[2] Even before the onset of the Great Recession, the racetracks struggled to compete with the competition introduced by modern casinos.

Fortunately, all of the state's racetracks—with the exception of Anthony Downs, which has become a hotel and apartment complex—have the potential to once again entertain the state's residents and visitors—if the Kansas legislature permits them to compete economically with the modern casinos. The modern structure of economic competition takes the form of so-called "racinos," racetracks that allow other types of gaming. In Kansas, the other types of gaming would come from slot machines (or, more generally, video lottery terminals). The racing combined with the additional gaming creates the entertainment mix that excites enough customers to make the overall racing operation economic viability—and enhances the racing purses to attract the best race horses and greyhounds; a virtuous circle that promotes excellence in the Kansas horse- and greyhound-breeding industries.

The Woodlands in Kansas City, Kansas might perhaps be considered the economic centerpiece of the restoration effort. The track, which would only horse races in its new incarnation, sits 3.5 miles from the Kansas Speedway. The State of Kansas has committed more than $500 million of economic development incentives to this area to make it a premier tourism destination. The excitement of horse racing would add yet another major attraction to complement the Kansas Speedway, the Sporting KC soccer team, the T-Bones baseball team, the Schlitterbahn Waterpark, the vast amounts of shopping (including Cabela's and Nebraska Furniture Mart)—and the Hollywood Casino.

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1 Wikipedia accurately defines a "business cluster" as "a geographic concentration of interconnected businesses, suppliers, and associated institutions in a particular field." https://en.wikipedia.org/wiki/Business_cluster

[2] Technically, the Camptown Greyhound Park in Frontenac, Kansas counts as a fifth racetrack, but historically it has struggled to stay in operation.

Economic research suggests that horse racing and casino gaming reinforce each other.[3] From a market-competition perspective, Kansas would have both horse racing and casinos in close proximity to one another, so the Kansas destination would offer a superior entertainment package relative to the casino offerings on the Missouri side of the Kansas City border. (A similar argument can be made about the Camptown Greyhound Park in southeast Kansas. When paired with the newly authorized state-owned casino in Pittsburg, Kansas, Camptown would offer a unique package of entertainment relative to the cluster of casinos in northeast Oklahoma. The Kansas package could prove to be the superior entertainment draw.)

Table 1:
History of State Revenues from Pari-Mutuel Gaming (Dollar amounts in thousands, inflation-adjusted to 2015$)

1989	$260
1990	12,997
1991	13,797
1992	13,621
1993	11,728
1994	n.a.
1995	9,230
1996	7,407
1997	5,693
1998	5,552
1999	5,585
2000	5,621
2001	5,151
2002	4,868
2003	4,851
2004	4,301
2005	3,789
2006	3,440
2007	3,077
2008	2,129
2009	284

Source: Kansas Legislative Research Department, *Kansas Tax Facts*, various years.

Ruffin Companies—a long-enduring, Kansas-based holding company with many successful gaming and hospitality properties in its portfolio—now owns The Woodlands racetrack, the Wichita Greyhound Park, and the Camptown Greyhound Park (located in Frontenac); it bought them from previous owners who did not have the economic wherewithal to survive. Ruffin Companies has not asked the state government for any economic incentives to reopen these properties—only an opportunity to allow the venerable Kansas traditions of horse racing and greyhound racing to compete on a level playing field with the modern casinos. To create the level playing field, the Kansas Legislature must pass a law that reduces from 40 percent to 22 percent the state government's share on the proceeds from video gaming machines located at the racetracks—the same level paid by the modern casinos.

The legislation seeking to create a level playing field between the racetracks and the modern casinos also contains important provisions to strengthen the cash flows channeled into Kansas racing purses. Back when Kansas still ran horse races, competing states like Arkansas, Indiana, Iowa, and Oklahoma offered average purses per race 2.5-3.5 times larger than the purses offered by the Kansas tacks.[4] Purses in these states have grown significantly faster than the rate of inflation in the almost 10 years since Kansas racing went dormant; in some cases, they have almost doubled. The increased cash flows to live racing made possible by expanded gaming will allow Kansas racetracks to compete for the participation of the best horses (and the best greyhounds).

Table 1 provides a history of the revenues the State of Kansas received from the pari-mutuel gaming enabled at the racetracks. The citizens of Kansas passed an amendment to the Kansas Constitution in 1986 to enable pari-mutuel wagering. Clearly, the early 1990s marked the high point for spectatorship at the racetracks.

[3] Douglas M. Walker and John D. Jackson, "Do U.S. Gambling Industries Cannibalize Each Other?" *Public Finance Review*, Vol. 36, No. 3, May 2008, pp. 325-326.

[4] For example, according to data published by The Jockey Club, the following were average purses per race for thoroughbred horse races from 2001 to 2007: Arkansas = $24,200; Indiana = $13,000; Iowa = $20,100; Kansas = $6,500; Oklahoma = $16,000. According to data published by the American Quarter Horse Association, the following were average purses per race for the quarter horse races from 2000 to 2004: Iowa = $11,450; Kansas = $5,600; Oklahoma = $15,150. (These dollar figures have not been adjusted for inflation.)

Commentators often point to the advent of casino gaming in Kansas City, Missouri in 1994 as a contributing factor to the decline of pari-mutuel gaming in Kansas, especially at The Woodlands. The data in Table 1 support this perspective.

According to data compiled by the business research firm Dun and Bradstreet, in the early 1990s The Woodlands employed approximately 800 people; the Wichita Greyhound Park employed about 400 people; Eureka Downs (in Greenwood County) employed about 95 people; and the Camptown Greyhound Park in Frontenac (Crawford County), which opened in 1995 and never got any business traction, employed less than 10 people during its short time in operation.

Table 2: Casino Statistics for States with Racinos

State	Total Number of non-Tribal Casinos, including Racinos	Total Number of Racinos	Total Job Count	Reported Wages (Millions)	Average Jobs per Casino	Average Wages per Casino Job
Delaware (a)	3	3	2,775	$105.2	925	37,906
Florida (a)	6	6	3,319	104.7	830	31,534
Indiana (a)	13	2	12,543	461.8	1,045	36,819
Iowa	18	3	9,558	341.1	531	35,686
Kansas (a)	**4**	**?**	**1,344**	**50.5**	**448**	**37,537**
Louisiana	18	4	15,061	631.0	837	41,896
Maryland (a)	2	1	499	17.5	250	35,010
New Mexico (a)	5	5	918	29.8	459	32,429
New York (a)	9	9	5,233	189.6	654	36,237
Ohio (a) (b)	4	1	4,197	91.3	1,399	21,746
Oklahoma	2	2	870	n.a.	435	n.a.
Pennsylvania (a)	11	6	10,162	339.8	1,452	33,435
Rhode Island	2	2	n.a.	n.a.	n.a.	n.a.
West Virginia (a)	5	4	4,351	134.7	1,088	30,954

(a) These results derive from an AGA survey of casinos. Not all casinos chose to participate. The total jobs and wages figures--and the calculated averages--count only the casinos that participated in the survey.

(b) Ohio has seven racinos, six of which opened after the survey date.

Source: American Gaming Association, State of the States, 2013

Estimating the Economic Impact of the Racinos: Operations and Renovations

Ruffin Companies estimates that its three properties: the Woodlands, the Wichita Greyhound Park, and the Camptown Greyhound Park, will employ about 2,000 people, about two-thirds more than the total number employed during the historic high-point of the facilities.

Table 2 documents job and wage statistics for casinos in states that have operating racinos. The results ratify the validity of the expected employment levels at the proposed Kansas racinos (and the associated spill-over benefits for employment at the Eureka Downs horse racing track).

For the sake of analysis, it seems conservative to understand the economic contribution to Kansas of between 1,500 and 2,000 direct racino jobs in the state. Racino job levels, rather than racino revenues, offer the most stable variable for use in the economic impact analysis. A well-managed racino must remain well staffed even in periods of sub-standard revenue generation. For purposes of the analysis, the study will use the average wage in five states to estimate the wage per job in Kansas. These five states have racinos as the primary casino type: Delaware, Florida, New Mexico, New York, and West Virginia. The average wage in these states, based on the figures in Table 2, amounts to almost $34,000 exactly ($33,979.87).

Table 3: Estimated Economic Impact of Race Track Operations (Two Scenarios)

Direct Race Track Jobs	Direct Race Track Wages	Indirect Jobs	Induced Jobs	Indirect + Induced Wages	Total Jobs	Total Wages	Estimated Personal Income Taxes	Estimated Personal Sales Taxes	Estimated Residential Property Taxes
1,500	$51,000,000	590	377	$47,931,382	2,467	$98,931,382	$1,785,874	$1,950,675	$1,592,886
2,000	$68,000,000	787	502	$63,908,509	3,289	$131,908,509	$2,381,165	$2,600,900	$2,123,849

Source: Table 2 data; IMPLAN multipliers; U.S. Bureau of Economic Analysis income data; author's calculations.

The standard approach to economic impact analysis uses the input-output model built and maintained by IMPLAN Group, LLC. An input-output model begins by quantifying the industry-to-industry transactions that take place in a specific time period. The quantification of the transaction linkages allows for a measurement of how much employment, labor income, or total output in one industry sector relates to the same, corresponding metrics in another industry sector. These matched metrics form the basis for calculating economic multipliers: the economic influence of a unit change in one industry (say, an increase or decrease in employment) can be traced through to the estimated changes in other, transactionally-related industries—assuming that no other off-setting changes take place.

Table 3 reports the estimated economic impact that the day-to-day operation of the racetracks, once fully operational, would have on the Kansas economy. As discussed above, the direct jobs and associated wage income derives from the data presented in Table 2. The "indirect" and "induced" jobs, along with the associated income, result from an application of a Kansas-specific version of the IMPLAN model. This report uses the IMPLAN model solely to derive the appropriate economic multipliers; in the case of Table 3, employment multipliers. The average income for the "indirect" and "induced" jobs derives from separate research on the average, Kansas-specific income earned in the various industry sectors "impacted" by an increase in employment in the industry sector represented by the racetracks. The estimated taxes reported in Table 3 derive from an application of estimated statewide average tax rates levied on incomes, retail sales, and residential real property.

The interpretation of the results in Table 3 indicate that net-new total employment of between 1,500 and 2,000 at the three proposed racinos (and Eureka Downs) would result in total statewide net-new employment of between 2,450 and 3,300. This employment would generate estimated annual wages of between $98 million and $132 million. As a further matter of interpretation, note that the "indirect" jobs do not result from the direct jobs (and the associated income); they result from the operation of four race tracks doing sufficient business to employ between 1,500 and 2,000 people. The race tracks would conduct business with a variety of other in-state entities—those business transactions would support the indirect jobs and the associated wages (many of which represent higher average wages than those paid directly by the race tracks to their employees). The "induced" jobs result from the higher statewide total household income that results from the estimated direct employment, indirect employment, and net business profits.

Prior to the racinos becoming fully operational, the Ruffin Companies plan to renovate the buildings on the three properties it owns. Based on the experience Ruffin Companies has with similar properties, it estimates that a combined construction budget of about $160 million will upgrade the three facilities to its quality standards.[5] The company has not yet developed detailed plans, because the economic viability of the investments depend upon the outcome of pending legislative action.

Table 4 reports the estimated economic impact of just the construction budget of $160 million—with the assumption that Ruffin Companies spends $80 million each year for two years. According to the IMPLAN model, $80 million in construction expenditures equates to about 500 direct (full-time-equivalent) construction jobs. Most of the renovations would take place in the metro areas of Kansas; construction jobs in the metro areas average about $60,000 per year, so total construction wages would sum to about $30 million each year. The remainder of the annual spending would flow into business activities involved directly or indirectly with the construction-related renovations, thereby supporting indirect jobs, with average wages of about $53,500. The income generated from the direct and indirect economic impacts would further support about 563 induced jobs, with an average wage of about $44,000. (Note, once again, that the estimates in Table 4 quantify only the economic impact of the construction-related renovations. They omit the substantial investments the Ruffin Companies will undertake in order to make each facility a luxurious and secure racino.)

Table 4: Estimated Economic Impact of Construction-Related Racino Facility Renovations

Period	Direct Construction Jobs	Direct Construction Wages	Indirect Jobs	Induced Jobs	Indirect + Induced Wages	Total Jobs	Total Wages	Estimated Personal Income Taxes	Estimated Personal Sales Taxes	Estimated Residential Property Taxes
Year 1	500	$30,009,353	407	563	$46,699,309	1,470	$76,708,662	$1,384,717	$1,512,499	$1,235,080
Year 2	500	$30,009,353	407	563	$46,699,309	1,470	$76,708,662	$1,384,717	$1,512,499	$1,235,080
Total	n.a.	$60,018,706	n.a.	n.a.	$93,398,618	n.a.	153,417,324	$2,769,435	$3,024,999	$2,470,160

Source: IMPLAN multipliers; U.S. Bureau of Economic Analysis income data; author's calculations.

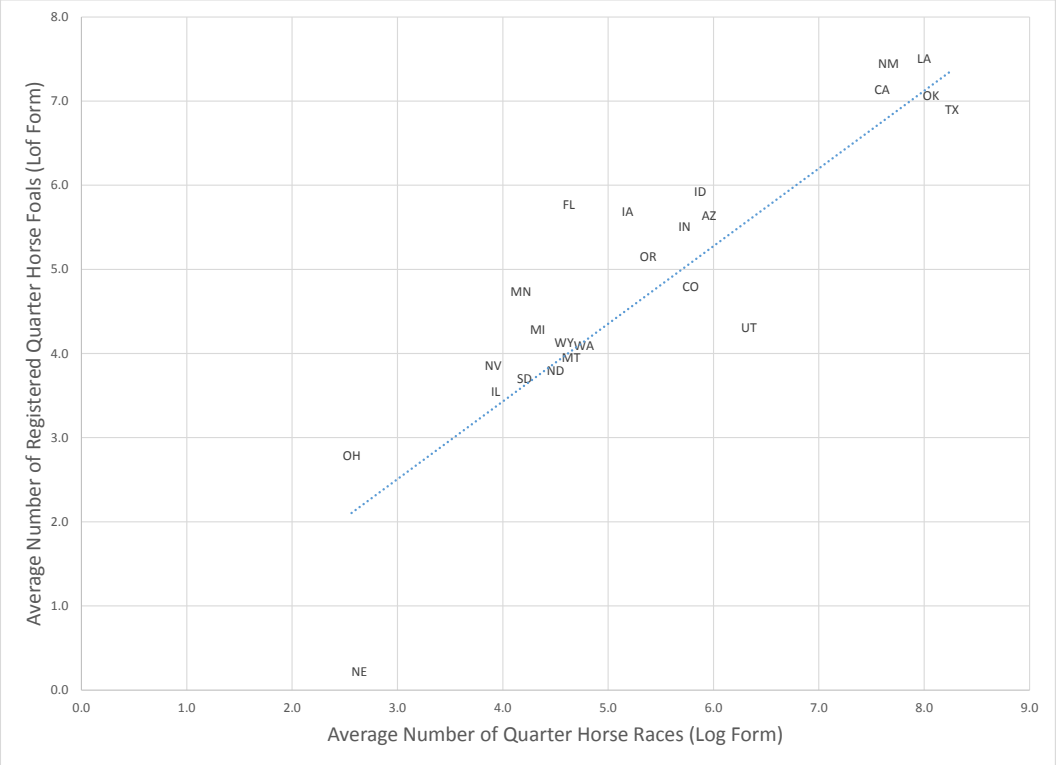
The Link between Racinos and Rural Economic Opportunity

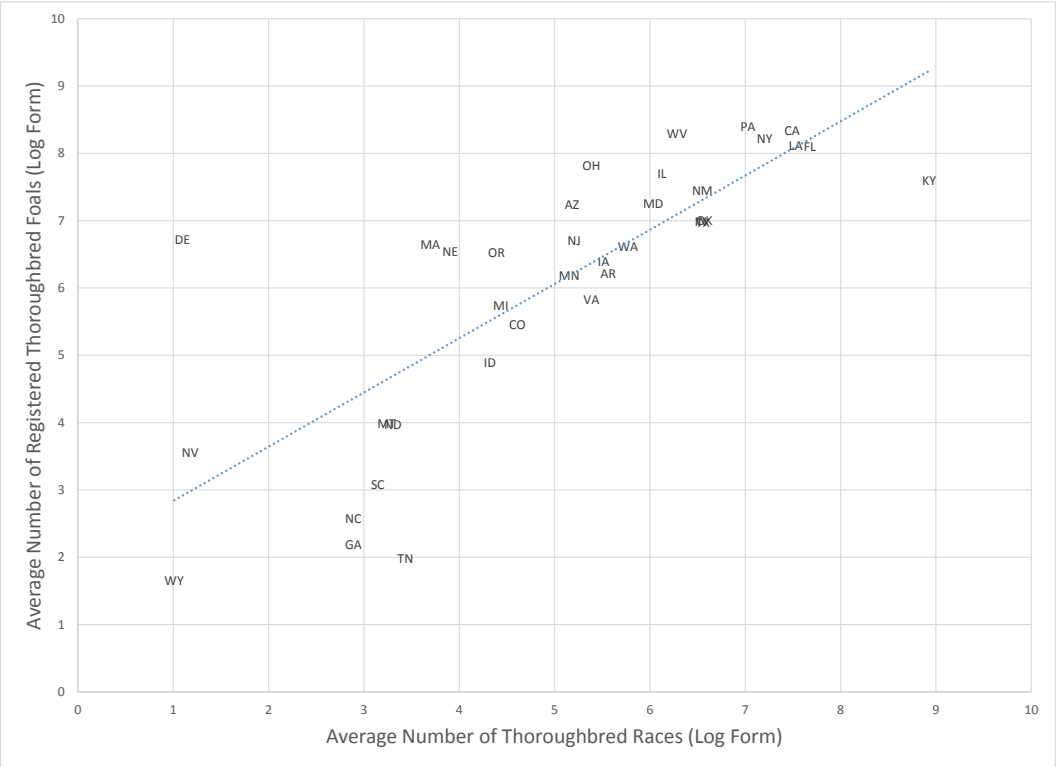
Pari-mutuel racing turns recreation and tourist dollars into a pipeline of financial support for ranchers and farmers: horse breeders and dog breeders, and the support services employed by those breeders. It creates a market-driven, win-win dynamic in the most basic economic way.

With reference to Table 1, pari-mutuel wagering alone can no longer generate the financial resources requires to support financially viable racing programs; the industry has evolved past that point. Consumers now seek destinations that offer racing and casino-type activities, even if such activities are limited to slot machines or video lottery terminals. That explains why so many states over the past two decades have allowed their racetracks to develop into "racinos."

[5] Private correspondence between the author and an executive of the Ruffin Companies.

Chart 1A and 1B:
More Races, More Race Horses (both Quarter Horses and Thoroughbreds)





Sources: American Quarter Horse Association and The Jockey Club.

Table 5: State-by-State Count of Horse Races and Registered Foals

Data for Quarter Horses: 2010-2014

State	Average Number of Quarter Horse Races	Average Number of Registered Quarter Horse Foals	Rank: Number of Races	Rank: Number of Foals
Louisiana	1,456	2,977	1	3
New Mexico	1,359	2,125	2	4
California	1,005	1,998	3	5
Oklahoma	939	3,177	4	2
Texas	787	3,885	5	1
Idaho	299	355	6	8
Florida	257	102	7	18
Iowa	234	178	8	13
Arizona	225	387	9	7
Indiana	198	306	10	10
Oregon	138	217	11	11
Colorado	97	325	12	9
Minnesota	91	65	13	23
Utah	59	565	14	6
Michigan	58	76	15	21
Wyoming	49	98	16	19
Washington	48	118	17	15
Montana	41	104	18	17
Nevada	38	50	19	27
North Dakota	36	90	20	20
South Dakota	32	67	21	22
Illinois	28	51	22	26
Ohio	13	13	23	34
Nebraska	1	14	24	33
Kansas	0	203		12
Missouri	0	166		14
Arkansas	0	111		16
Kentucky	0	61		24
Alabama	0	56		25
Maryland	0	43		28
Georgia	0	39		29
North Carolina	0	36		30
Tennessee	0	24		31
Mississippi	0	14		32
Pennsylvania	0	11		35
South Carolina	0	10		36
New York	0	3		37
Wisconsin	0	2		38
West Virginia	0	1		39
New Jersey	0	1		40
Alaska	0	0		
Connecticut	0	0		
Delaware	0	0		
Hawaii	0	0		
Maine	0	0		
Massachusetts	0	0		
New Hampshire	0	0		
Rhode Island	0	0		
Vermont	0	0		
Virginia	0	0		

Source: American Quarter Horse Association

Data for Thoroughbred Horses: 2010-2014

State	Average Number of Thoroughbred Races	Average Number of Registered Thoroughbred Foals	Rank: Number of Races	Rank: Number of Foals
Pennsylvania	4,448	1,127	1	6
California	4,192	1,791	2	4
West Virginia	4,044	537	3	11
New York	3,741	1,344	4	5
Louisiana	3,364	1,860	5	3
Florida	3,329	2,158	6	2
Ohio	2,502	219	7	17
Illinois	2,214	458	8	12
Kentucky	2,013	7,552	9	1
New Mexico	1,715	699	10	9
Maryland	1,420	418	11	13
Arizona	1,395	178	12	20
Oklahoma	1,098	714	13	7
Indiana	1,082	688	14	10
Texas	1,068	703	15	8
Delaware	831	3	16	41
New Jersey	825	182	17	19
Massachusetts	769	40	18	28
Washington	749	321	19	14
Nebraska	698	50	20	26
Oregon	691	81	21	24
Iowa	605	248	22	16
Arkansas	506	261	23	15
Minnesota	485	173	24	21
Virginia	343	218	25	18
Michigan	312	85	26	23
Colorado	237	101	27	22
Idaho	134	75	28	25
Montana	55	26	29	32
North Dakota	53	27	30	31
Nevada	35	3	31	40
South Carolina	22	23	32	34
North Carolina	13	18	33	36
Georgia	9	18	34	36
Tennessee	7	31	35	30
Wyoming	5	3	36	42
Alabama	0	41		27
Kansas	0	36		29
South Dakota	0	24		33
Utah	0	21		35
Missouri	0	12		38
Mississippi	0	8		39
Wisconsin	0	3		43
Connecticut	0	1		44
Alaska	0	0		
Hawaii	0	0		
Maine	0	0		
New Hampshire	0	0		
Rhode Island	0	0		
Vermont	0	0		

Source: The Jockey Club

The added revenue streams from the expanded gaming strengthens the operating economics of the tracks—and, importantly, improves the lucrative purses available to successful breeders.

People unfamiliar with live racing also may be unfamiliar with a common convention is horse racing and greyhound racing: the rules related to "state-bred" programs. In brief, purses won from racing pay better if the winning horses or greyhounds have been bred in the state.

A Focus on the Economic Impact of the Equine Industry

Charts 1A and 1B, along with Table 5, convey the fundamental relationship between horse racing and horse breeding. In general, an abundance of horse races in a state leads to an abundance of horses being raised in that state.
Chart 1A (quarter horses) and Chart 1B (thoroughbred horse) each depict only the states that host horse races. (Kansas does not appear on the charts because it hosted no races in the 2010-2014 time frame used for the charts.) The positive relationship between race count and horse count is clear. Chart 1A and Chart 1B present the race-count and horse-count data in log form for simple visual convenience. Some states have so many more races and horses than others that the states with smaller counts get lost on the graph, so the statistical pattern becomes camouflaged without the log-transformation of the data.

Table 5 reports the actual data that created Chart 1A and Chart 1B. The table reports quarter horses and thoroughbreds separately. The table sorts the data by the number of races hosted by a state and then matches a state's race-rank with the state's rank according to the number of registered foals. The correspondence does not match perfectly, because numerous factors drive the economics of horse racing from a breeder's perspective—and historical inertia plays an important part in the physical location of successful breeders.

Historical inertia helps explain why Kansas ranchers still breed a considerable number of quarter horses even though Kansas horse races stopped in 2008. That explains why the Kansas equine industry is poised for a rapid restoration if the rejuvenation of in-state racing once again makes the breeding of a race horse a worthwhile investment risk.

The Economic Importance of State-Bred Programs

The breeding of a race horse is the equivalent of a risky business investment that promises no return for at least four years. But the sizable expenses associated with the investment begin immediately.

One of the important up-front investment decisions relates to where a breeder or owner wants to race his or her horse. The array of state-bred programs influence this decision. Each state that conducts horse racing offers a program with lucrative rewards for both the sire and dam (father and mother) of the foal as well as for the foal participating in races restricted for state-bred registered horses.

Jeff Rutland, whose family has bred horse for 65 years in Independence, Kansas, has a deep understanding of race-horse economics. He says answers to the following list of questions drive the race-horse investment decision.[6]

1. **What stallion should breed with your mare?** Aside from genetics, the stallion's state of residence is important because a breeder will most likely want the foal to be "state bred." Some state-bred programs require the mare to be bred to a stallion within the state for the foal to be eligible. For a breeder or owner in a state without a racing program, the decision to breed his or her mare to an out-of-state stallion adds extra expenses to the investment, over and above the stud fee, because of transportation to an out-of-state ranch and the boarding fees the ranch will charge.

2. **Where do you want you foal to be born?** To be eligible for state-bred status in every state, the foal must have been born in that state. Currently, therefore, Kansas breeders must choose a state other than Kansas if they want to reap the benefits of a state-bred racing program. In addition, the qualifications to establish mare residency differ from state to state. The average amount of time necessary for a mare to spend in a state-bred state ranges from 60 to 90 days above and beyond the time spent at the breeding farm to breed the mare for the next year's foal. This requirement adds yet another set of expenses that a Kansas breeder would not incur on his or her own ranch.

3. **Where do I want to race my horse the majority of its racing career?** A stable state racing program helps to mitigate certain investment risks. Convenience of getting to the track to watch your horse run is also important.

4. **In which state do you think your foal can race most competitively?** Better purses bring stiffer competition. More racing opportunities bring more horses. State-bred programs often work to level the playing field so that races take place among horses of similar breeding and value.

5. **Where can I make the most money racing?** The best horses make the most money at the toughest tracks. Is your horse

[6] Private correspondence between the author and Jeff Rutland, owner of the famed Rutland Ranch.

Exhibit 1: Kansas State-bred Program

RACING PROGRAM

The racing program pays purse supplements to registered Kansas-bred horses when they run in races in the state of Kansas. These horses would also be eligible for KS Bred Stakes Races and KS Bred Stakes Added Money from the KS Bred Program.

To be eligible for registration as a Kansas Bred the horse must have been foaled in the state of Kansas. Any horse that was foaled in Kansas may be registered as a Kansas Bred regardless of age. However, it is cheaper to register as a weanling, than as a two year old and older.

BREEDING PROGRAM

The breeding program pays Stallion and Mare Awards to eligible horses whose offspring have raced and earned "race points" in the state of Kansas. For a Stallion or Mare to be eligible to earn money in the breeding program they must be registered and certified in the breeding program. If a Stallion or Mare is a "Registered Kansas Bred" with stamped papers, they can "CERTIFIED" in the Breeding Program.

If a Stallion or Mare was foaled in Kansas but never was registered as a Kansas Bred, or if a Stallion or Mare was foaled in a State other than Kansas, you can apply for Registration as a "KANSAS DOMICILED" Stallion or Mare. The Stallion or Mare must also be "CERTIFIED" into the Breeding Program.

A Stallion must be "Certified" with the KS Bred Breeding Program prior to servicing mares and will stand for service within the state of Kansas and will not stand for service anywhere outside the state of Kansas during the calendar year in which the stallion's offspring are conceived.

A Mare must be "Certified" with the KS Bred Breeding Program prior to foaling for the mare to earn breed awards from that foal. The foal must also be in the Kansas Bred Program to earn the breed awards for the mare.

Source: Kansas Quarter Horse Racing Association and Kansas Thoroughbred Association.

bred to be one of the very best—or should you take advantage of a less competitive state-bred program where you may be a bigger fish in a smaller pond?

According to Jeff Rutland, states such as Florida, Indiana, Iowa, New Mexico, New York, Oklahoma, Pennsylvania, and West Virginia—the racino states listed in Table 2—have the best state-bred programs today because they have harnessed expanded gaming revenues to increase the size of purse money state-bred horses can win. In addition to offering lucrative purses and breed awards, these states also offer a substantial number of live race days—an important factor for the stability of a state's program, a fact underscored by the data in Table 5.

Exhibit 1 describes the Kansas-bred program that operated for the benefit of Kansas horsemen when the state had operating racetracks. That language would once again become operative if the tracks re-open. The answer to the investment questions posed above could become: Kansas. Such an outcome would enhance the economics of the horse industry in Kansas. Current Kansas horsemen would have more economic opportunity (combined with lower expenses). The re-opening of the racetracks would also make Kansas a more attractive investment location for racehorse breeders in other states, especially breeders in nearby states such as Colorado, Illinois, Missouri, and Nebraska—states currently without expanded gaming revenues to support pari-mutuel horse racing programs.

The Economic Impact of the Kansas Equine Industry

The breeding and boarding of horses injects more than $275 million each year into the Kansas economy (see Table 6 below). The 2012 Census of Agriculture counted 74,873 horses in the state of Kansas. In that same year, the Census reported that horse sales amounted to $17 million.

Map 1 shows the county-by-county distribution of horses (and horses per farm), according to the 2012 census. Not surprisingly, a significant number of horses reside in counties with large populations. Horseback riding is a popular (and frequently competitive) pastime.

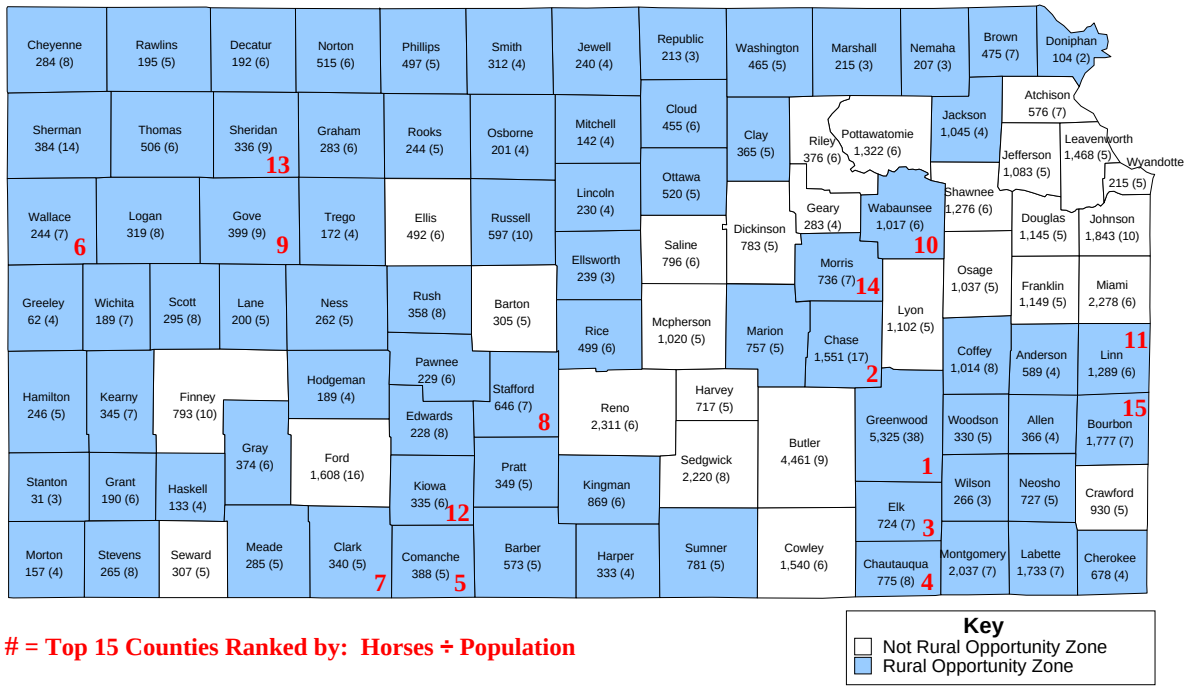
Ultimately, this study is concerned with the current (and potential future) population of horses associated with racing and how they may be distributed among Kansas ranches and farms. However, sorting out how the distribution of racing-related horses compared with recreation-related horses would require an in-depth survey of more than 10,000 farms or stables. Furthermore, the two classifications become intertwined over time: race horses become pleasure horses or rodeo horses, so the overall economic impact of the equine industry does not necessarily fall into tidy categories. That said, there are ways to consider how the restoration of horse racing in Kansas might rejuvenate the race-horse breeding industry in Kansas—and how, in turn, that rejuvenation would relate to statewide economic development.

In addition to complementing the State of Kansas's more than $500 million of economic development investments around the Kansas Speedway, the restoration of horse racing would complement another Kansas economic development program: Rural Opportunity Zones, which seeks to improve the economic potential of rural areas by enticing people to move there. The Rural Opportunity Zone program, according to the Kansas Department of Commerce,

"authorizes [designated] counties to offer one or both of the following financial incentives to new full-time residents: (1) Kansas income tax waivers for up to five years and (2) Student loan repayments up to $15,000."

The restoration of pari-mutuel racing requires no incentives; it simply requires the Kansas legislature to authorize the racinos to compete at parity with the other casinos in the state. The shaded counties on Map 1 represent the 77 counties that have a Rural Opportunity Zone designation. About 55 percent of Kansas horses resided in a Rural Opportunity Zone county.

Map 1: 2012 Census of Horses (and Horses per Farm)



To provide a bit more insight into how race-horse breeding may take place in Rural Opportunity Zones, Map 1, in addition to reporting horses per county, also reports (1) the number of horses per ranch/farm and (2) the 15 counties that have the highest ratio of horses to people. Greenwood County in southeast Kansas has the most horses, the most horses per farm, and the most horses per county population. Greenwood County is home to Eureka Downs, a horse racing track first established in 1872.[7] Although Kansas currently has no pari-mutuel horse racing, an enterprising group of Kansas entrepreneurs have turned the track into the Eureka Downs Training Center. The Center's website says: "Eureka Downs Training Center LLC leased Eureka Downs to preserve it for racing, provide an excellent surface to train race horses, and aid our community and the State of Kansas in maintaining a viable horse industry."

[7] https://en.wikipedia.org/wiki/Eureka_Downs

The counties ranking second, third, and fourth in terms of horses per population also happen to be in the same region as Greenwood County. It may be safe to conclude that these types of counties—and the remaining top-ranked counties in terms of horses per population—represent areas in which racing-related horse breeding is a meaningful commercial enterprise. These are the regions of the state that may most benefit from the restoration of pari-mutuel horse racing—and all of them reside in a Rural Opportunity Zone.

To estimate the economic impact the equine industry has on Kansas—and to estimate the racing horse portion of the impact—this report relies on a detailed survey commissioned by the Oklahoma Equine Alliance in 2013.[8] The first two columns of Table 6 report the key Oklahoma-related information that provides for a quantification and classification of the horse population in Kansas—and, by extension, the information necessary to enable an economic impact assessment.

Oklahoma has more than twice as many horses as Kansas, according to the 2012 Census of Agriculture. However, the proportion of horse boarded on owned farms and unowned farms is consistent with the proportions reported for Kansas. This report will assume that the other proportions of horse ownership (commercial and racing) reported for Oklahoma also have validity for Kansas. This report will also adopt the direct economic impact per horse that can be derived from the Oklahoma survey and economic impact study.

Table 6: Estimates of The Economics Impact of the Kansas Equine Industry

	Oklahoma Study			
Horse Ownership Classification	Share of Horse Population	Direct Annual Economic Impact per Horse	Estimated Horse Count In Kansas	Estimated Direct Annual Economic Impact in Kansas (Millions)
Family Horses Borded on Family Farm	77%	$2,923	57,739	$168.8
Family Horses Boarded Elsewhere	10%	$2,635	7,458	$19.7
Commercially-Owned Horses for Recreational Services	8%	$8,152	5,745	$46.8
Breeder- or Investor-Owned Horses for Racing-Related Activities	5%	$10,630	3,930	$41.8
TOTAL	100%	n.a.	74,873	$277.0

Source: The Innovation Group, "Economic Impact Study: Oklahoma Equine Industry," June 2013; 2012 Census of Agriculture; author's calculations

The Oklahoma study collected detailed expenditure records from a large sample of horse owners. These expenditures include the capital expenditures and all of the on-going expenses associated with the breeding and nurturing of horses. The expenditures capture a meaningful measure of "final demand" in the Oklahoma economy, as it relates specifically to the equine industry. "Final demand" is one key variable that can be used by input-output models to identify multiplier effects; indeed, as discussed earlier, tracing the inter-industry linkages associated with final demand or employment in a particular industry is precisely the goal of constructing input-output models.

[8] The Innovation Group, "Economic Impact Study: Oklahoma Equine Industry," June 2013. Note: The version used for this report appears to be a white paper with more survey detail than the final published product. The final product is available on the internet; the white paper appears to be unavailable on the internet.

As reported in Table 6, applying Oklahoma data to Kansas results in an estimated final demand in the equine industry that amounts to $277 million. The race-horse estimate for final demand in Kansas amounts to $41.8 million.

Table 7: Estimated Indirect and Induced Economic Impact of the Kansas Equine Industry

Horse Category	Direct Farm Jobs	Direct Farm Wages	Indirect Jobs	Induced Jobs	Indirect + Induced Wages	Estimated Personal Income Taxes	Estimated Personal Sales Taxes	Estimated Residential Property Taxes
All Horses	n.a.	n.a.	1,259	777	$93,766,944	$1,692,648	$1,848,845	$1,509,734
Racing-Related Horses	n.a.	n.a.	190	117	$14,140,761	$255,264	$278,820	$227,679
Each Racing-Related Horse	n.a.	n.a.	0.05	0.03	$3,598	$65	$71	$58

Source: 2012 Census of Agriculture; IMPLAN multipliers; U.S. Bureau of Economic Analysis income data; author's calculations.

As reported in Table 7, these horse-related levels of final demand indicate that the entire Kansas equine industry supports more than 2,000 indirect and induced jobs, along with $93.8 million in associated wages; the racing-related component of the equine industry supports more than 300 indirect and induced jobs, along with $14.1 million in associated wages.

Table 7 does not report direct jobs and wages for the equine industry, because data limitations prevent any credible effort to quantify them. Data compiled by business research firm Dunn and Bradstreet lists 74 business establishments in Kansas that self-identify as "horse farms." These establishments claim 215 jobs. Several of the establishments have the term "quarter horses" as part of the company name; the employment levels of these establishments range from five to 10 jobs per establishment. For 2013, the Bureau of Labor Statistics reports 11 business establishments that self-identify as being in the industry category: "Horses and other equine production." These establishments employ a reported 26 employees at an average annual wage of $24,538. Because farms dealing with horses may self-identify as a large number of different types of agriculture-related industry categories, the available data may undercount actual horse-related farms by a large amount—especially since the 2012 Census of Agriculture reports 10,740 farms with horses.

The final step in estimating the economic impact of restoring pari-mutuel horse racing in Kansas deals with estimating how many more race horses might be bred and boarded on Kansas soil if racing returns. Rather than make forecasts about the future, history can provide some guidance.

Chart 2 and Chart 3 provide two series of useful historical data. Chart 2 shows the number of racing-bred quarter horses born in Kansas. Chart 3 shown the number of thoroughbred mares bred in Kansas to produce a racing foal. As the charts reveal (along with Table 5 above), Kansas breeders have tended to focus on quarter horses. Both charts illustrate the clear downward trend in the breeding of racing horses. Unfortunately, for the sake of Kansas analysis, the 2008 closing of the racetracks in Kansas closely coincides with the onset of the Great Recession. The same data sources used to create Chart 2 and Chart 3 reveal a general declining trend for most states. (Indiana is a noteworthy exception in the case of quarter horses; Indiana has a two thriving racinos. The one just north of Indianapolis offers an apt comparison for The Woodlands.)

Chart 2:
Number of Race-Bred Quarter Horses Foals Born in Kansas

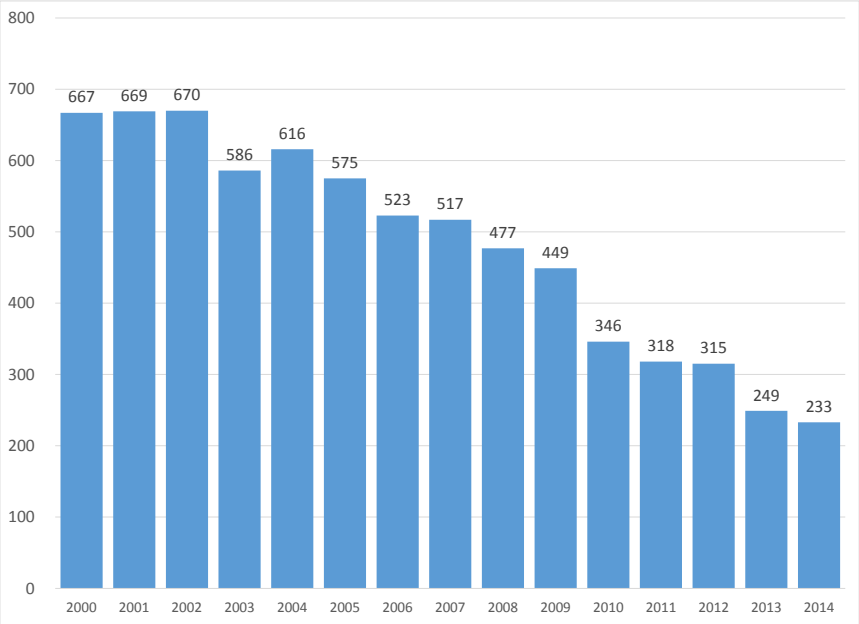
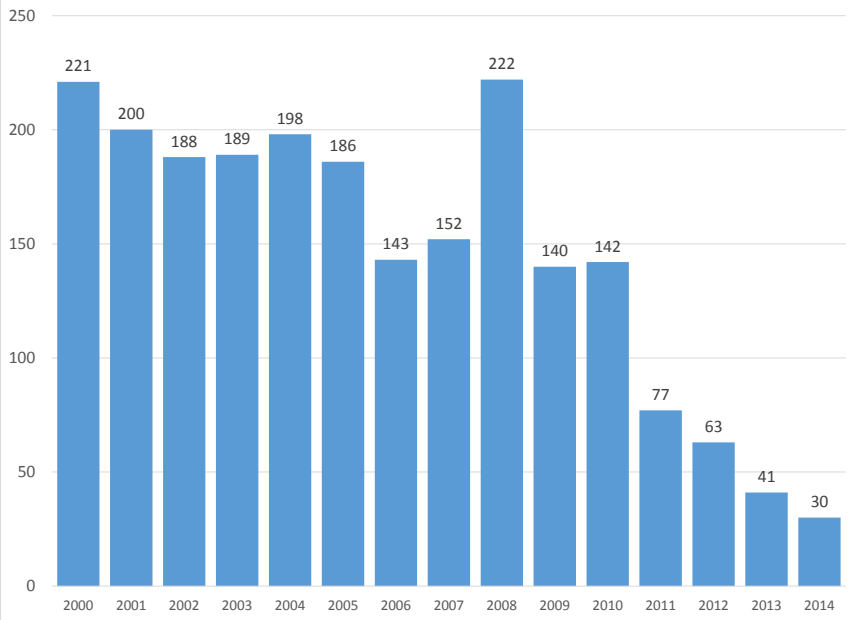


Chart 3:
Number of Thoroughbred Mares Bred in Kansas



Sources: American Quarter Horse Association (Chart 2); The Jockey Club (Chart 3)

For a piece of useful evidence about how Kansas horsemen may respond to the restoration of live horse racing in Kansas, note on Chart 3 the spike in thoroughbred mares bred in 2008. The Woodlands did not close its door until August of 2008. The year before, the Kansas Legislature passed the Kansas Expanded Lottery Act. In addition to enabling the creation of a "destination casino resort" in four gaming zones around the state, the Act authorized licensed pari-mutuel tracks to operate slot machines. The new law may have created a surge of optimism among race horse breeders. (A surge in the auction price of racing greyhounds shows a spike in the same year. See Chart 4 below.)

The 2008 surge in the breeding of thoroughbred mares suggests that the restoration of live racing in Kansas could result in a return to the much higher number of race horses bred and maintained in the year 2000. For the sake of analysis, and to be conservative, assume that the restoration of pari-mutuel horse racing in Kansas resulted in the 2000-2008 average number of quarter horse foals born and thoroughbred mares bred. That would mean, on an average

annual basis, an increase of 271 quarter horses and 107 thoroughbred horses, or 377 racing foals. Based on data for thoroughbred horses, for every racing foal, the industry typically nurtures about 1.8 mares and 0.16 stallions—or almost two additional horses per foal. The foals plus the mares and stallions add to 754 additional racing-related horses.

Table 7, for analytical convenience, reports that every racing-related horse creates 0.05 indirect jobs and 0.03 induced jobs. Based on those numbers, 754 additional race horse would support, annually, 38 indirect jobs and 23 induced jobs, with associated income of $219,500. (Of course, these estimates might be too conservative. Returning to the number of foals produced in 2000 (887), would increase the foregoing estimates by 135 percent.)

Note, too, that race horses live happy lives long after their racing days. There would be a cumulative economic impact that results from returning to the days when Kansas bred 400 to 800 race horses per year. The horse population would grow much faster than otherwise. And Table 6 tells us that a growing horse population has a positive economic impact on the state.

The economic impact analysis does not consider purse money won from pari-mutuel racing, because the purse money would provide the economic incentive to increase the population of Kansas-bred race horses. The Oklahoma study discussed above notes that horse breeders tend to just breakeven in a profit-and-loss sense.[9] As life-long horseman Jeff Rutland has said: "Horsemen are driven by a passion for racing; bust mostly they have a passion for caring and nurturing young foals to maturity. [Many] folks don't understand when you tell them your favorite place of solace is in your barn talking to your horses. Watching your children grow with responsibility, trust, love and many other character traits they learn by being around horses makes every penny you've spent worth it a thousand times over."

A Focus on the Economic Impact of the Greyhound Industry

The economics of the greyhound breeding and racing industry has many broad similarities to the equine industry. The return of live greyhound racing to Kansas would have the same type of economic impact as the return of live horse racing. In summary: More greyhounds being bred, raised, and raced on Kansas soil—thereby generating a higher average economic value per greyhound.

If live racing resumes in Kansas, a state-bred program would apply to Kansas-bred greyhounds just as it would apply to Kansas-bred horses. Kansas greyhound breeders would have an immediate incentive to shift their focus from Arkansas, Florida, and West Virginia back to Kansas.

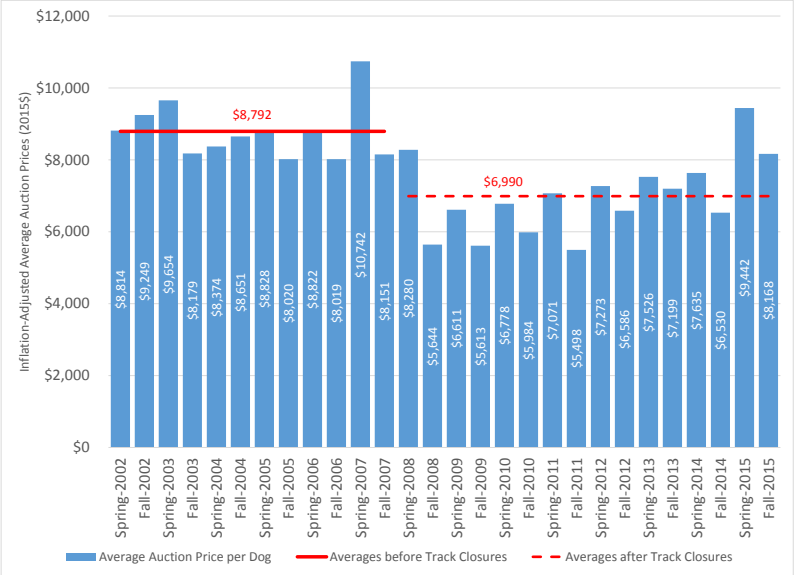
This shift of focus back to Kansas would have two economic-impact implications. First, it would increase the number of greyhounds bred and kenneled on Kansas soil. The Wichita Greyhound Park would operate 14 kennels and the Camptown Greyhound Park would operate 10 kennels. The management of these kennels would be outsourced to Kansas-based kennel operators. Second, if history is a guide, as indicated by Chart 4, live racing would increase the

[9] The Innovation Group, "Economic Impact Study: Oklahoma Equine Industry," June 2013, p. 12.

economic value of the subset of racing greyhounds sold at the Abilene auction—about 80 percent of which (in value terms) tend to be sold by Kansas-based breeders.[10]

Like entrepreneurs in any industry, the entrepreneurs in the greyhound and equine industry respond aggressively to perceived economic opportunity. In this connection, note two important points related to Chart 4. First, when greyhound racing still took place in Kansas—at both The Woodlands and the Wichita Greyhound Park—racing greyhounds sold at auction, on average, for prices about 25 percent higher than they sold after the termination of live racing in Kansas. The return of racing should restore this historic pattern. Second, when greyhound breeders and racers thought, in 2007, that the authorization of slot machines at the racetracks would end the tracks' economic troubles, the value of greyhounds spiked to the highest level shown on Chart 4. This spike indicates an economic response similar to the spike shown on Chart 3 with regard to horse breeding.

Chart 4:
Average Price per Greyhound at Abilene Auctions ($2015)



Sources: National Greyhound Association

Results from a Survey of Kansas Greyhound Farms

Currently, the National Greyhound Association counts 136 Kansas members (about 95 percent of which represent farms with greyhounds on them); before the end of racing, it counted 274 Kansas members. To gather information for this report, the NGA sent a survey to its Kansas membership—and produced a solid response rate of 35 percent (48 responses). The responses provided detailed data about the number of greyhounds (6 months old and older) on each farm—and the aggregate 2014 and 2015 spending per farm.[11] The survey also asked the greyhound breeders and racers to anticipate how many more greyhounds—after a three-year adjustment period—they would add to their farms if live greyhound racing returned to Kansas.

Table 8 reports key results from the survey. Because the survey generated a high response rate, Table 8 reports results that proportionally extrapolate the results from the 48 respondents to the known population of Kansas-based greyhound farms. About 50 percent of the greyhound farms represent families handling less than 30 greyhounds (ranging uniformly from 10 dogs per farm to

[10] Private correspondence between the author and Gary Guccione, Secretary-Treasurer, National Greyhound Association.

[11] Greyhounds under 6 months old are considered puppies under the care of their mothers and, therefore, generate much lower expenses per greyhound. However, the medical and insemination expenses associated with breeding remain as a substantial element of the per-dog expenditures of a greyhound farm.

25 dogs per farm). The small operations spend, on average, $1,135 per "adult" greyhound. The other half of the greyhound operations become much larger, with five farms that have multi-million dollar operations—and much higher spending per greyhound. (The overall average Kansas per-greyhound expenditure of $1,245 is consistent with, but slightly lower than, the $1,677 per-greyhound expenditure reported in a recent study of the economic impact of the West Virginia greyhound racing industry.)[12]

The Kansas survey results demonstrate that, like any industry, greyhound operations tend to specialize—and that specialization can influence the spending patterns of the various farms. In the survey results, Kansas farms tend to specialize in one of three areas: boarding, breeding, or racing. Generally speaking, those respondents focused on racing tended to spend more per greyhound than boarders or breeders; however, some boarders spend a significant amount more per greyhound than average. These generalization may explain why to 250-500 farm size in Table 8 shows a relatively low per-greyhound spending pattern than the other farm-size categories.

The Economic Impact of the Kansas Greyhound Industry

The greyhound population and spending-per-greyhound information reported in Table 8 will form the foundation for the economic impact analysis of the current greyhound industry—and the projected impact of a return to live greyhound racing in Kansas. As with the equine information in Table 7, expenditures capture a meaningful measure of "final demand" in the Kansas economy, as it relates specifically to the greyhound industry. "Final demand" is one key variable that can be used by input-output models to identify multiplier effects; indeed, as discussed earlier, tracing the inter-industry linkages associated with final demand or employment in a particular industry is precisely the goal of constructing input-output models.

Exhibit 2: Comment from Greyhound Survey Respondent

"The survey only included dogs owned by myself and raised on boarding farms for eventual racing. My primary business is as a veterinarian. Most of our work involves canine reproductive work. Most of our canine clients are greyhound producers. We breed dogs from all over the United States and deal with international shipments of semen and dogs. This business draws breeders to Kansas, to board and breed dogs here. Many breeders come and stay briefly to deliver and pick up dogs. If Greyhound racing becomes a reality in Kansas, we would have a significant increase in the number of greyhound breeders visiting Kansas and boarding dogs here, as well as establishing new Greyhound farms, and expanding existing farms."

The information in Table 8 (13,796 greyhounds multiplied by $1,245) indicates that greyhound farms in Kansas spent about 17.2 million annually in 2014 and 2015. Per the survey responses, the return of live racing to Kansas could increase that amount (in current dollars) to between $23 million and $29 million.

Table 9 reports the economic impact estimates of the three different annual expenditure levels—which should be considered conservative, because they do not attempt to include on-farm

[12] Eric Bowen, et al., "The Economic Impact of Thoroughbred and Greyhound Racing Industries on West Virginia's Economy 2012," Bureau of Business and Economic Research, West Virginia University College of Business and Economics, January 2014, p. 54

Table 8: Profile of Kansas Greyhound Industry, 2014-2015

Farm Size: Count of Mature Greyhounds	Number of Farms	Number of Mature Greyhounds	Spending per Mature Greyhound	Projected Increase in Mature Greyhounds if Live Racing Returns to Kansas	
				Low-End	High-End
Under 30	61	783	$1,135	1,016	1,819
30-100	29	1,499	1,374	1,878	3,333
100-250	20	3,013	1,412	771	1,688
250-500	15	4,658	784	713	1,528
Over 500	5	3,843	2,014	250	1,000
Total	130	13,796	$1,245	4,628	9,369

Source: National Greyhound Association suvey of Kansas membership; author's calculations.

employment and income, for reasons discussed below. Currently, based on IMPLAN model multipliers, the Kansas greyhound industry supports 126 indirect and induced jobs with an average wages of about $46,000. The job numbers would grow by about one-third if the low-end estimates of greyhound expansion comes to pass and by two-thirds if the high-end estimates of greyhound expansion comes to pass.

Concerning the expansion of the number of greyhounds on Kansas soil caused by the return of live racing, it is important to consider that the expansion could come from a growing number of greyhound farms—not necessarily just the expansion of current farms. A 2003 survey of the Kansas greyhound industry showed, just like in Table 8, that a high percentage of greyhound farms operated with dog counts below 30 greyhounds. In that era, Kansas was home to twice as many greyhound farms. The return of live racing to Kansas could induce a return to the former count of greyhound farms—once again underscoring the potentially conservative estimates reported in Table 9.

Table 9: Estimated Indirect and Induced Economic Impact of the Kansas Greyhound Industry

Economic Impact Scenario	Direct Farm Jobs	Direct Farm Wages	Indirect Jobs	Induced Jobs	Indirect + Induced Wages	Estimated Personal Income Taxes	Estimated Personal Sales Taxes	Estimated Residential Property Taxes
Current Greyhound Industry (2015)	n.a.	n.a.	78	48	$5,814,674	$104,964	$114,651	$93,622
Greyhound Industry w/ Racing Low-End Estimate	n.a.	n.a.	104	64	$7,765,427	$140,179	$153,114	$125,031
Greyhound Industry w/ Racing High-End Estimate	n.a.	n.a.	131	81	$9,763,733	$176,251	$192,516	$157,205

Source: National Greyhound Association survey; IMPLAN multipliers; U.S. Bureau of Economic Analysis income data; author's calculations.

Table 9, like Table 7 related to the equine industry, reports no estimates of the direct jobs and incomes provided by the greyhound industry, because of the difficulty in producing reliable estimates. Naturally, the farm owners count as employees of their farms and the incomes they receive from boarding, breeding, or racing greyhounds count toward the income generated by the greyhound industry. The survey did not ask respondents to supply income amounts (just the breakdown in percentage terms of how the farms generated income). The survey results indicate that the 48 responding farms have 84 full-time employees and 61 part-time employees. Not surprisingly, the larger farms have the higher employment counts. Data reported by the U.S.

Bureau of Labor Statistics indicates that the full-time employees working in greyhound operations would earn about $19,550 annually. If one assumes the part-time employees make half the annual earnings of the full-time employees, the survey respondents pay total annual wages of about $2.2 million. Extrapolating the survey results to the 130 farms reported in Table 8 would indicate 230 full-time jobs and 173 part-time jobs, with total wages paid of $6.2 million. What is difficult to know is how these numbers would change with the return of live greyhound racing and the expansion of the farms contemplated by the survey responses.