

Executive Summary

The United States Horse Industry is a large and economically diverse industry that is a key contributor to the overall fabric of the U.S. economy. Horse owners and industry suppliers, racetracks and off-tracking betting operations, horse shows and other industry segments all generate discrete economic activity contributing to the vibrancy of the overall industry. The spending generated within the horse industry, and the subsequent spending between co-dependent industries contributes thousands of jobs and billions of dollars to the economy on an annual basis.

The significance of the industry is reflected in the following bullets.

- ◆ The horse industry contributes approximately \$39 billion in direct economic impacts to the U.S. economy on an annual basis.
- ◆ When considering indirect and induced spending, the horse industry annually generates approximately \$102 billion dollars for the U.S. economy.
- ◆ Of the total economic impacts reported, approximately \$26.1 billion is generated from the racing segment, \$28.8 billion from the showing segment, and \$32.0 for the recreational segment.
- ◆ Approximately 1.8 million people own horses, with another 2 million people involved as volunteers or through a family affiliation.
- ◆ The horse industry sustains approximately 1.4 million full-time equivalent jobs on an annual basis, with over 460,000 of those jobs created from the direct spending within the industry.
- ◆ There are approximately 9.2 million horses in the U.S. with approximately 3.9 million involved in recreation and another 2.7 million horses participating in horse shows.
- ◆ The median household income of those individuals and families owning horses is around \$X, with approximately 34% of the industry having a median household income of less than \$50,000 and 28% of the horse owning population having an annual income of over \$100,000.
- ◆ The horse industry pays approximately \$1.9 billion in taxes on an annual basis to all levels of government.

This study was commissioned by the American Horse Council Foundation in June of 2004. This study was performed on behalf of a “Project Steering Committee” consisting of representatives from several other industry organizations including The American Quarter Horse Association, The U.S. Equestrian Foundation, The Jockey Club, and the National Thoroughbred Racing Association. The study was conducted by Deloitte LLP and completed in June 2005.

Project Background

In 1996, the American Horse Council Foundation (“AHCF”) commissioned the Barents Group LLC to perform a study to estimate the economic impacts of the horse industry on the United States. This study produced estimates for several key industry characteristics including: the number of horses in the United States, the total direct industry contribution to the U.S. Gross Domestic Product, and the total number of jobs created/sustained by the horse industry.

Since 1996, several changes have had a profound impact on the industry. Gaming at racetracks has gained increasing acceptance and approval, with video lottery terminals (slots and electronic gaming machines) being approved in many jurisdictions across the United States, stimulating a new type of economic activity at each location. The proliferation of the internet, both for the advertisement and purchase of goods and services, has had a profound impact on horse owners and horse industry suppliers. Modifications in approved horse breeding rules and regulations for both American Quarter Horses and Thoroughbreds continue to affect the economics of the industry. New wagering technologies continue to be introduced at racetracks and OTBs, some of which have contributed to the growth in Off-Track wagering. Changes to federal, state and local tax policies have also directly affected horse owners and farms. These changes are just a few of the many examples illustrating differences in the current horse industry from the industry that was represented in the last version of the study.

Recognizing the industry’s need for more current economic information, the AHCF hired Deloitte Consulting LLP (“DC”) in June of 2004 to perform an update of the economic impact analysis. The 2005 study, while commissioned by the AHCF, was performed on behalf of a “Project Steering Committee” consisting of representatives from several other industry organizations. The American Quarter Horse Association, The U.S. Equestrian Foundation, The Jockey Club, and the National Thoroughbred Racing Association, provided funding to this project, and all had representation on the Project Steering Committee. Each organization provided oversight and input during the course of the project to ensure that a representative sample of horse industry segments was considered during project planning and execution phases of the study, and that appropriate industry experiences and expertise were brought to bear during the project. In addition to these organizations on the Project Steering Committee, significant funding for the project was also provided by the US Trotting Association, the American Paint Horse Association, Keeneland Association, American Association of Equine Practitioners, Friends of New York,

The current study does not differ dramatically from the 1996 study. In fact, some of the same economic modeling and sampling approaches used for the 1996 have also been applied to the 2005 study update. Applying a similar methodology, allows for greater consistency between the 1996 study and this current version. However, the 2005 report goes beyond merely reproducing the work that was previously conducted. This study has made several enhancements to improve both the quality of data collected for this study, the accuracy with which the data has been reported, and the methods by which the

information and findings are presented. In addition, previous studies have been more horse racing centric; this study has more thoroughly and effectively captured other vital elements of the industry (e.g. showing and recreation) in both the survey sampling and economic analysis.

Some of the key horse industry statistics and economic indicators reflected in this study include:

- Estimated number of horses in the U.S.
- Estimated number of horses in each of the 50 states
- Number of people participating in the industry
 - By form of participation (e.g., owner, service provider, volunteer, etc.)
 - By activity (e.g., racing, showing, recreation)
 - By breed (e.g., Quarter Horse, Thoroughbred)
- Direct, Indirect and Induced economic impacts of the industry on U.S. and individual state economies
 - Contribution to Gross Domestic Product
 - Number of Full-Time Equivalent (FTE) jobs produced

Contemporary perceptions of the horse industry are frequently limited to horse racing and/or the farms that support horse racing. This study highlights the true diversity of the industry, from the individual owner who owns a single horse to a syndicate that may own several farms and hundreds of horses. The information will show how the industry is comprised of many different socio-economic segments, with each population contributing to the industry through their respective spending on goods and services, as well as by providing employment and volunteer opportunities.

With methodological enhancements, greater representation from the showing and recreation industry segments and the largest sample size of horse owners ever captured, this report is one of the most comprehensive economic impact studies ever issued on the U.S. horse industry.

I.1 Report Overview

The 2005 economic impact analysis of the U.S. horse industry report is presented in three different volumes. The organization of the report has been modified from the 1996 version. The three volumes include:

- National Summary – This section highlights economic impacts from the horse industry on a national basis. Statistical information is compiled and consolidated for the entire United States, and all economic data and associated impacts are provided on a national basis. The methodology and approach used to perform the study are introduced in this section, with additional detail regarding the surveys, economic models and analytical approaches available in the Project Methodology volume.

- State Breakouts – A specific report was developed for each of the 15 “Break-Out States” as designated by the Project Steering Committee. Each report summarizes the economic impacts generated from the horse industry on that particular state. In addition, each section contains impact and employment information segmented by primary horse use (racing, showing, recreation), as well as by breed (and a combination of both). The Break-Out states contributed additional financial support to help support the funding of the overall economic impact study undertaking.
- Project Methodology – This section provides additional details on the overall study approach including: survey sampling approach, data collection activities, sampling stratifications, and the development of the economic models. The section also provides additional detail on the supporting rationale for key project assumptions.

In making economic impact estimates, generally accepted economic principals and modeling approaches have been used in developing this report. Impact estimates included in the report reflect not only the industry’s direct contribution to the US Gross Domestic Product, but also all of the additional spending stimulated in other inter-related industries.

As this section will illustrate, the U.S. horse industry has a very large and positive economic impact on other segments of the U.S. economy. The economic impacts manifest themselves in the following ways:

Direct Effects are purchases made by individuals directly involved in the horse industry on goods and services required specifically for the horse industry. The purchases are exactly equal to the value of goods and services produced. For example, \$100 spent by a horse owner to buy a saddle for a horse would be considered direct spending and would provide \$100 in value to the horse industry.

Indirect Effects are purchases made by industry suppliers and their suppliers to support the manufacturing and delivery of their respective products. For example, the supplier selling a horse saddle must purchase raw materials to make the saddle, the equipment to manufacture the saddle (or pay another supplier to manufacture the saddle), and support services to deliver and market the saddles, etc. Each of the businesses involved in the manufacturing and delivery of the saddle also must pay their respective suppliers, and so on. This spending effect is reflected in the *Indirect Economic Impacts*.

Induced Effects are purchases made by individuals employed by the U.S. horse industry or the industry’s suppliers. For example, a small business owner providing recreational trail rides presumably spends a percentage of their earnings on food, clothing, entertainment, etc. As a result the business owner’s spending, workers in each of those other inter-related industries will be able to increase their production and consumption, and so on.

The economic activity generated by the horse industry quantified throughout this report is shown in terms of economic impacts, employment impacts and fiscal/tax impacts.

II. Size of the U.S. Horse Industry

The U.S. horse industry not only sustains a diverse segment of businesses and suppliers across the entire United States, but the industry continues to provide recreation and enjoyment to casual participants and non-commercial owners. The horse industry itself is comprised of many different sub-segments, from the small rural owner that owns a single horse for recreational purposes, to the largest Thoroughbred farms and industry suppliers. The industry has historically been associated with racetracks, off-track betting operations, and horse shows. While these segments are still a significant part of the industry, the U.S. horse industry touches many more economic segments including breeding, horse maintenance and training, recreation and many other less commonly thought of horse-related activities. As tables in this document will illustrate, all 50 states contain horses, as such, all 50 states are supporting horse-related activities.

The size of the industry can be seen in the following statistics:

Table II-1

The United States Horse Industry consists of approximately 9.2 million horses representing many different uses and disciplines. These horses stimulate a direct economic impact of \$39.2 billion, supporting approximately 470,000 full-time equivalent employees (considering indirect and induced impacts the number of FTE is well over one million). These economic data points provide a compelling indication of the size and importance of the horse industry.

The approach used to estimate each of these industry-related characteristics will be addressed in greater detail. Details regarding the actual calculations can be found in Volume 3 – Project Methodology.

The Number of Horses

For this study, the total number of horses has been estimated for the United States, as well as the total number of horses in each of the 50 states. To generate these estimates, approximately **400,000** horse owners and other industry participants were solicited either through a postcard survey invitation, an email invitation, or a telephone call and asked to provide information on their involvement in the industry including a profile of their ownership status (e.g., number of horses owned, type of horses, sole or partial ownership, use of horses, etc.). The process of compiling horse owners was performed in several steps, with the names being provided by horse industry suppliers, breed associations and activity organizations. A more detailed account of this process is provided later in this volume.

The horse owners included in the survey sample are representative of all segments of the U.S. horse industry; with total horse estimates being fully inclusive of both recreational and commercial horse owners. As this is the first time horse estimates were required for

all 50 states, a different weighting approach was used than in previous studies. The table on the following page illustrates the number of horses within each state.

Insert Table II-1.1

As the table highlights, Texas – with almost 1 million horses - has the most horses of any of the 50 states. California and Florida are second and third with approximately 700,000 and 500,000 horses respectively. As the table highlights, every state in the U.S. has a presence of horses, with 44 of the 50 states representing at least 20,000 horses.

The methodology used in developing state-by-state horse estimates is highlighted in the Project Methodology volume. It is important to understand that in estimating total horse counts, several factors can have an influence on the number of horses shown in a particular state, as well as explaining differences in horse counts from other published sources.

- ◆ Responses to the Owners Survey were tabulated based on the primary address of the respondent's home residence and/or operational headquarters. To simplify the survey process instrument, owners were not asked to identify the states in which their horses were stabled, nor the states in which they competed. Asking additional state-specific questions would have added significant confusion to the survey process and compromised the quality of respondent data.
- ◆ The survey process solicited input from all industry segments and ownership types. Other published sources frequently solicit data from only those horse owners that own at least five horses. As indicated, this study surveyed owners with only a single horse used for recreational purposes to large farms with hundreds of horses.
[Geoff & Mike: Do we want to illustrate this with a table? E.g., % of owners with 1 horse, 2-5 horses, 5-10 horses, and 10+ or something like that?]
- ◆ Horse counts in this study reflect both registered and unregistered horses. It is also expected that many owners of unregistered horses may have indicated their horses were Thoroughbreds or Quarter Horses based on their animals having Thoroughbred or Quarter Horse bloodlines somewhere in the pedigree.
- ◆ While the horse counts in most states are consistent with expectations, some states, particularly a few in the Midwest and West, have lower counts than anticipated. It is possible that the understatement is due to the presence of large working and commercial ranches whose horse populations could not be adequately captured through the sampling scheme.

Survey respondents also identified the breed and primary use of the horse(s) for which they were either the primary or partial owner. Horse owners were asked to identify the primary use of their horse(s), with seven possible options (racing, showing, other competition, recreation, work, breeding and other). Owners were separately asked to identify the breed of the horses they own (thoroughbred, quarter horse and other). In developing impact estimates it was determined that an insightful way of presenting the data would be by breed and use. Further, it was determined that the use categories should be collapsed to four primary activities (racing, showing, recreation, and other). The process by which these assignments were made is presented in the Methodology volume.

The following table segments the total horse count by use and by breed. So of the 9.2 million horses, each horse was assigned to one of three breed categories (Thoroughbred, Quarter Horse, or Other), as well as assigned to one of four primary use categories (racing, showing, recreation, other). Horse assignments were based primarily upon the survey responses provided by the horse owner sample.

**Table 5
Number of Horses by Breed and Activity**

<i>Activity</i>	<i>Racing</i>	<i>Showing</i>	<i>Recreation</i>	<i>Other</i>	<i>Total</i>
Thoroughbreds	559,322	336,992	228,290	167,203	1,291,807
Quarter Horses	127,720	1,078,639	1,353,236	728,707	3,288,302
Other Breeds	157,489	1,303,324	2,325,398	856,528	4,642,739
TOTAL	844,531	2,718,954	3,906,923	1,752,439	9,222,847

The table above highlights some key industry characteristics:

- Almost 4 million horses are used for recreation - a frequently overlooked segment of the industry – more than any of the 3 other primary uses
- The Showing industry supports the use of approximately 2.7 million horses, and over 1 million Quarter Horses
- As anticipated, Thoroughbreds make up the overwhelming majority of the racing segment with approximately 560,000 horses Thoroughbreds used for racing.

Note: The “Other” use category included horses whose primary use was identified as either work (on ranches, feedlots, riding stables, horse drawn carriages, back country packing, etc). “Other Competition,” defined as horses whose primary use is any sanctioned competitive riding discipline that is neither racing nor showing, but is performed in competition with other horses or riders for compensation in the form of money, prizes or rewards, was included, after consultation with the committee, in the Showing category.

Participation in the U.S. Horse Industry

To estimate the number of participants in the U.S. horse industry, it is necessary to establish a definition for the industry. This study has remained consistent with the 1996 study by defining the industry as activities directly contributing to the production of horses or to the production of amusement and recreation services that utilize horses. Based on this definition, the following individuals were included as industry participants:

- ◆ Horse owners, including partial owners with no active role in the care, maintenance or training of the horse(s);
- ◆ Employees of horse owners, service providers, racetracks and shows, including all full-time part-time and seasonal employees;
- ◆ Family members of owners and other volunteers who are involved in the care and maintenance of a horse(s) without pay;

Consistent with the 1996 approach, we have not included individuals that attend racing or other horse-related events, or who lease horses on a short-term basis. Including these individuals would result in an even higher participation estimate.

Unlike the 1996 study we are not separately listing the employees of Non-horse owning service providers including individuals such as stable owners, trainers, veterinarians, rodeo stock contractors, horse transportation providers, jockeys, sulky drivers, rodeo cowboys, and mounted police, as direct participants . These are obviously important participants in the industry, but as will be discussed more fully below, they have been included as indirect participants. In addition, the economic impact of these segment will be captured through the expenditures of the horse owners, as an indirect effect on GDP.

Adhering to this definition, it is estimated that 4.66 million people participated in the horse industry. The table below highlights the participation by industry sub-segment, as well as the percentage of the total ownership population each group represents. As the table illustrates, there are approximately 1.8 million horse owners, and another 2 million individuals that participate in the industry through a family association or as a volunteer. Of the 1.8 million horse owners, approximately 240,000 are dedicated primarily to breeding activities, while another 480,000 owners identified their primary role in the industry as competing.

Table 2
Number of Horse Industry Participants by Form of Participation

<i>Type of Participation</i>	<i>Number of Participants</i>	<i>Percent of Total Participation</i>
Horse Owners	1,836,436	
Primary Activity, Breeding	237,868	5.10%
Primary Activity, Competing	481,238	10.33%
Primary Activity, Other	1,117,330	23.98%
Primary Activity, Service Provider	119,392	2.56%
Employees		
of Owners	598,398	12.84%
of Racetracks	70,382	1.51%
of Shows	33,166	0.71%
Family Members and Volunteers	2,001,946	42.96%
TOTAL	4,659,720	100.00%

The horse industry also provides over 700,000 jobs across all use categories, and supports another 120,000 service providers that are directly receiving revenue from the horse industry without owning a single horse.

III. The Economic Impact of the Horse Industry on the U.S. Economy

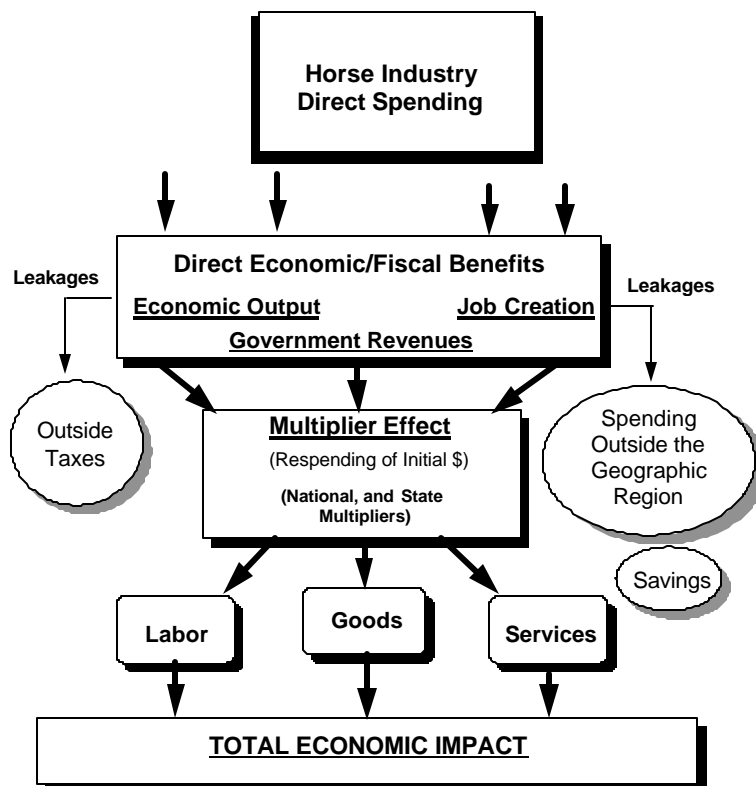
The horse industry, and every economic sector, provides/receives support from many other industry segments. The horse industry relies on the goods and services supplied from other industry segments. In turn, other industry segments are supported by the spending from horse industry participants.

Likewise, horse industry employees rely on other industries to meet their consumption demands, while horse industry jobs are supported and sustained by the spending and demand for goods and services by non-horse industry participants. These economic segment inter-dependencies each contribute to the overall fabric that is the U.S. economy.

The measurement of economic impacts is the quantification of internal and inter-dependent economic activities. As indicated earlier, economic impact can be measured in three different categories, direct, indirect and induced impacts.

Standard economic theory estimates the total economic impact of spending by applying a “multiplier” to the direct effect in order to calculate the indirect and induced impacts. Each multiplier is intended to estimate the number of times a single dollar of spending gets circulated through economy. Multipliers differ depending on industry segment. For example, \$1 of spending in the horse industry will have a different economic impact than \$1 of spending in the telecommunications industry.

Overview of Economic Impact Approach



The methodology developed for this study uses the primary data collected from industry participants (racetracks, shows, horse owners and service providers) to measure the spending internal to the horse industry. Another way to consider internal industry spending is by estimating the spending from owners, tracks, OTBs and shows specifically related to the operation of horse-related activities. For each of the spending categories internal to the industry, a corresponding multiplier is applied to generate the overall indirect effects and induced effects. For instance, a multiplier for tack & equipment would be applied to the amount spent on tack & equipment. A more detailed description of the multiplier can be found in the Methodology section of this report.

This is the approach that has been used to estimate the economic impacts. This approach while conservative, minimizes a potential critique that total economic and employment impacts have been inflated as the spending considering horse-related has only been loosely defined. In this approach, the spending that is being estimated is clearly within the horse industry, and thus accurately reflects the operation of the industry.

Horse Industry Direct Impacts/Contribution to US Gross Domestic Product

The contribution to the United States Gross Domestic Product is estimated by taking the value of goods and services from each horse industry segment and providing a sum total from all segments (GDP contribution is the same as the “direct” effect). The estimated contribution to the GDP from the U.S. horse industry is approximately \$39.2 billion dollars per annum.

This estimate was generated using a methodology consistent with the approach applied in 1996. When the Bureau of Economic Analysis (BEA) estimates total GDP contribution for various industries, the BEA does not capture a critical element of the horse industry when estimating the total value of horse related goods and services – more specifically the value of non-cash transactions. The survey tool applied to this project allows for the capture of information for which no cash transaction was involved. For example, a horse owner presumably derives value from a horse used entirely for recreation which generates no revenue/compensation, the same way an individual receives value from owning and selectively driving an antique automobile. Otherwise, there would be no purpose in owning a non-revenue generating horse, or any non-revenue generating item for that matter. The horse and the automobile both require care and maintenance, while providing no cash benefit. [Moreover, the horse is a living breathing animal with a personality and interactive qualities for which an object like an automobile can not provide.—delete?]

As part of this process, we have included the non-cash value to horse owners of horse services in our impact estimates. We are not able to distinguish between those owners that are operating as a business and those who are in the industry of the pure pleasure of the participation. Therefore, as a conservative estimate of the non-cash value we excluded horse owner profits, either positive or negative, in the calculation of the impact. Our estimates indicate that most horse owners were operating at a “loss” in a simple accounting sense. That is, their horse-related revenues were smaller than their expenses.

It should be noted that profits generated from horse shows and race tracks was assumed to be distributable (net of income taxes) to the owners of the various venues and part of the economic impact.

Table 3 (We'll need to change table references) summarizes the value of the horse industry's goods and services for various horse-related industry sub-segments. The direct effect is widely considered the most important economic indicator. The indirect and induced effects are included when estimating the total economic impact.

The table illustrates several key points about the annual operation of the horse industry, including;

- ◆ Contributions of nearly \$40 billion to the US. GDP
- ◆ Stimulates approximately \$63 billion dollars in indirect & induced impacts
- ◆ Attracts investments of nearly \$25 billion dollar in capital equipment and structures;
- ◆ Generation of approximately \$2.7 billion in profits to horse owners
- ◆ Creation of over \$4.1 billion dollars in taxes and land purchases

[ADD TABLE]

Table 3
Horse Industry Economic Impact on GDP by Expenditure Category⁽¹⁾

<i>Expenditure Category</i>	<i>Direct Effect</i>	<i>Indirect & Induced Effects</i>	<i>Total</i>
Spending that Generates Indirect Effects			
Horse-Related Goods (e.g., feed, tack, etc.)	\$7,641	\$13,504	\$21,145
Horse-Related Services (e.g., boarding, training)	\$9,484	\$18,250	\$27,734
Horse-Related Transportation (e.g., trailering)	\$2,875	\$5,071	\$7,946
Overhead (e.g., utilities, office supplies, etc.)	\$4,458	\$6,287	\$10,745
Capital Expenses (i.e. equipment and structures)	\$8,238	\$16,587	\$24,825
Spending that Generates Induced Effects			
Employee Compensation	\$1,309	\$2,014	\$3,323
Profits Distributable to Owners	\$1,049	\$1,613	\$2,662
Taxes and Land Purchases	\$4,143		\$4,143
TOTAL	\$39,196	\$63,325	\$102,522

(1) Numbers shown in millions

Table 6 (We'll need to change table references) highlights the total direct, indirect and induced impacts generated from the horse industry. As with the total number of horses, the economic impacts were also segmented by the breed of the horse as well as the primary use of the horse. The following table highlights how the direct impacts are generated by breed and activity. As you'll note, the total direct impact shown does not reconcile to the total direct impact shown in the previous table; a small proportion of the spending and revenue were from respondents who described themselves as horse owners, but who reported having zero horses. We have speculated that in these instances the respondent may be caring for a horse owned by someone else or the respondent may have sold the horse during the year. For this reason, this economic activity cannot be split across breed or activity, and so does not appear in the following table.

Table 6
Direct Effect on GDP by Breed and Activity⁽¹⁾

<i>Activity</i>	<i>Racing</i>	<i>Showing</i>	<i>Recreation</i>	<i>Other</i>	<i>Total</i>
Thoroughbreds	\$8,354	\$2,277	\$1,253	\$1,200	\$13,084
Quarter Horses	\$660	\$4,070	\$3,949	\$1,799	\$10,479
Other Breeds	\$1,683	\$4,411	\$6,683	\$2,502	\$15,280
TOTAL	\$10,697	\$10,759	\$11,886	\$5,501	\$38,843

(1) Numbers shown in millions

This table illustrates several important characteristics of the horse industry including:

- ♦ Racing, showing and recreation all generate in excess of \$10 billion in direct impacts. This is particularly important considering that the racing segment is commonly the only industry segment for which significant economic activity is generally associated. This table illustrates how other segments are also critical contributors.
- ♦ Thoroughbreds and Quarter Horses both generate \$13.1 billion and \$10.5 billion respectively in direct economic impacts. Equally important, all “other” horse breeds in combination generate over \$15.3 billion in economic impacts.

The significant amount of direct spending (almost \$40 billion) stimulated by the horse industry contributes to economic activity in many other industries as well. These impacts are reflected in the indirect and induced impacts. As the table summarizes, the horse industry contributes over \$62 billion in indirect and induced spending.

Table 7
Total Effect on GDP by Breed and Activity⁽¹⁾

<i>Activity</i>	<i>Racing</i>	<i>Showing</i>	<i>Recreation</i>	<i>Other</i>	<i>Total</i>
Thoroughbreds	\$20,771	\$6,089	\$3,414	\$3,324	\$33,598
Quarter Horses	\$1,627	\$10,822	\$10,582	\$4,539	\$27,569
Other Breeds	\$3,726	\$11,877	\$17,979	\$6,788	\$40,371
TOTAL	\$26,124	\$28,788	\$31,975	\$14,651	\$101,538

(1) Numbers shown in millions

When considering indirect and induced expenditures, the racing, showing and recreational segments all generate over \$26 billion dollars in economic impacts. Once again, the numbers highlight the significance of each industry segment as well as each of the respective breeds. Thoroughbreds are clearly a critical component of the overall industry, generating approximately \$33.6 billion dollars of impacts across all categories. However, Quarter Horses and other breeds also stimulate significant economic activity as well, with over \$27.6 billion and \$40.4 billion in impact respectively.

The largest single contribution to GDP is generated by Thoroughbreds in racing, stimulating economic activity of approximately \$20.8 billion. Quarter Horses generate in excess of \$10 billion in both showing and recreation, while the combination of other breeds generates almost \$12 billion and \$18 billion in economic activity in showing and recreation respectively.

Full-Time Equivalent Jobs Provided by the Horse Industry

In determining the number of individuals participating in the horse industry, it's estimated that approximately 702,000 people participate as employees (see table 2). In order to more accurately assess the number of horse industry employees, part-time and seasonal employees were converted into a Full-Time Equivalent basis. Following this conversion, it was estimated that the industry generates approximately 460,000 direct FTE jobs. When considering the jobs created from indirect and induced spending, the industry creates approximately 1.43 million full-time equivalent jobs.

Table 4
Direct, Indirect
and Induced Effects on Employment

	<i>Employment</i>
Direct Effect	459,600
Indirect Effect	914,394
Induced Effect	54,698
TOTAL	1,428,692

Table 4 summarizes all of the direct full-time equivalent jobs generated in the horse industry segmented by breed and primary use. As the table highlights, the racing segment contributes the greatest total jobs with total FTE employment in excess of 146,000, and the Thoroughbred breed within the racing segment contributes approximately 114,000 of these jobs. However, the other segments of the industry should not be discounted as showing and recreation generate approximately 99,000 and 128,000 jobs respectively for the horse industry. Those horses identified as having an “other” primary use contribute almost 80,000 jobs to the economy.

Table 8
Direct Effect on Employment by Breed and Activity

<i>Activity</i>	<i>Racing</i>	<i>Showing</i>	<i>Recreation</i>	<i>Other</i>	Total
Thoroughbreds	114,411	27,107	10,121	41,722	193,361
Quarter Horses	10,387	35,067	37,437	18,674	101,565
Other Breeds	21,827	36,877	80,766	19,216	158,686
TOTAL	146,625	99,051	128,324	79,612	453,612

In the same way that multipliers are used to estimate economic impacts, multipliers are also used to estimate the total number of jobs created through indirect and induced spending.

- ◆ Direct employment are jobs provided by the industry itself (see Chapter II);
- ◆ Indirect employment are jobs provided as a result of spending by industry suppliers;
- ◆ Induced employment are jobs provided as a result of spending by industry employees

As mentioned, when considering indirect and induced job creation, the horse industry creates over 1.4 million jobs. Table 9 provides a summary on how those jobs are generated by breed and use.

Table 9
Total Effect on Employment by Breed and Activity

<i>Activity</i>	<i>Racing</i>	<i>Showing</i>	<i>Recreation</i>	<i>Other</i>	<i>Total</i>
Thoroughbreds	307,236	88,232	43,477	74,191	513,137
Quarter Horses	24,685	136,867	138,305	57,923	357,779
Other Breeds	51,905	155,317	253,300	79,896	540,417
TOTAL	383,826	380,416	435,082	212,010	1,411,333

As shown, the racing and showing segments create approximately the same number of full-time equivalent jobs, with each segment generating 384,000 and 380,000 jobs respectively. The recreation segment generates over 435,000 jobs, with over 250,000 of those jobs being generated by horses identified as a breed other than Thoroughbred or Quarter Horse.

Taxes Paid by the Horse Industry

Taxes paid by the horse industry, while not generating any indirect or induced effects on GDP contribution do have a profound impact on local, state and federal budgets. Different taxes apply to different segments of the horse industry.

[TAXES COME DIRECTELY FROM SURVEY]

IV. Characteristics of the Horse Industry

The entire horse industry is comprised of many different sub-sectors; with each sub-sector representing a diverse and vibrant cross-section of geographies and socio-economic classifications. The dynamic industry composition creates the overall economic impact.

For instance, while racing may sometimes be referred to as “the sport of kings”, Table 11 illustrates the economic diversity of the overall horse owner/industry supplier population. Approximately 46% of the total sample has a gross annual household income of between \$25,000 and \$75,000. Approximately 9% of the industry population has an income greater than \$150,000 per year, while an almost equal amount (10.7%) has a annual income of less than \$25,000. This table helps to summarize the economic diversity of the horse industry and indicates how, depending on segment and activity, all different economic stratifications play a prominent role in the horse industry.

Table 11
Distribution of Horse Industry Participants
by Household Income

<i>Household Income</i>	<i>Count</i>	<i>Percent</i>
\$0 to \$24,999	209,879	10.73%
\$25,000 to \$49,999	453,511	23.19%
\$50,000 to \$74,999	435,930	22.29%
\$75,000 to \$99,999	306,797	15.69%
\$100,000 to \$124,999	199,646	10.21%
\$125,000 to \$149,999	94,672	4.84%
\$150,000 +	179,268	9.17%
Not Reported	76,124	3.89%
TOTAL	1,955,827	100.00%

The Geographic Diversity in the Horse Industry

The horse industry reaches into the far corners of all 50 states. The industry impact is generated from the smallest of rural areas to the largest cities. Certain activities such as breeding, training and maintenance are traditionally conducted in more rural areas, while racetracks and horse shows have generally operated in more urban areas. Regardless of primary type of involvement in the industry, the survey results indicate that horse owners and service providers reside in a diverse geography.

The following table highlights the wide range of communities represented from the horse owner/industry supplier sample.

Table 12
Distribution of Horse Industry Participants
by Community Size

<i>Size of Community</i>	<i>Count</i>	<i>Percent</i>
Less than 1,000 people	301,529	15.42%
1,000 to 4,999	390,640	19.97%
5,000 to 19,999	427,525	21.86%
20,000 to 49,999	310,510	15.88%
50,000 to 99,999	171,458	8.77%
100,000 to 499,999	188,151	9.62%
500,000 +	139,942	7.16%
Not Reported	26,072	1.33%
TOTAL	1,955,827	100.00%

Table 12 highlights how the horse industry benefits from participation from individuals representing all different types of home communities. Approximately 55% of the total sample resides in communities with less than 20,000 individuals. This population segmentation confirms the expectation that the industry is strongly supported by those individuals residing in what by most standards would be considered rural. However, the industry also represents individuals living in more heavily populated areas, with almost 25% of the sample living in communities with at least 50,000 residents.

The horse industry also represents many different ages as well. The majority of horse owners and industry suppliers are between the ages of 45 and 59. In addition, almost 17% of the segment represents a more youthful segment, between 18 and 29. What this table does not show is all of the children that participate within the industry, primarily through recreational and showing activities, as the surveys were targeted to only individuals of at least 18 years of age.

Table 14
Distribution of Horse Industry Participants
by Age

<i>Race</i>	<i>Count</i>	<i>Percent</i>
18 to 29	318,611	16.29%
30 to 44	692,517	35.41%
45 to 59	801,347	40.97%
60 +	117,762	6.02%
Not Reported	25,588	1.31%
TOTAL	1,955,827	100.00%

[Change column heading to “Age Group”, replacing “Race”]

V. Industry Spending Activity

This section provides a more micro view of the economic activity that is occurring within the industry. Economic impacts have been summarized based upon the spending reported from each of the various horse industry segments. Spending from all horse shows, racetracks, farms and owners in aggregate generate the direct impacts, and the impacts have been summarized on an industry-wide basis. This section provides revenue and expense information on a per horse, per show and per racetrack basis.

The information collected from the industry surveys, in conjunction with the input of industry experts, was used to develop the following tables.

Table 16 summarizes the industry revenue and expense averages on a per horse basis.

Table 15
Annual Revenue and Expense per Horse, by Activity

<i>Activity</i>	<i>Racing</i>	<i>Showing</i>	<i>Recreation</i>	<i>Other</i>	Total
Revenue					\$1,172
Purses and Fees	\$1,304	\$135	\$37	\$149	\$221
Stud Fees	\$118	\$58	\$22	\$39	\$44
Horse Sales	\$1,533	\$497	\$220	\$350	\$452
Boarding and Training	\$1,078	\$347	\$135	\$248	\$309
Veterinary Services	\$9	\$11	\$7	\$15	\$10
All Other Revenue	\$230	\$137	\$85	\$182	\$136
Expense					\$2,881
<i>Horse Related Goods</i>					
Feed, Bedding and Grooming Supplies	\$736	\$517	\$480	\$431	\$502
Medicine and Vitamins	\$143	\$119	\$113	\$100	\$114
Tack, Equipment and All Other Supplies	\$208	\$254	\$228	\$181	\$219
<i>Horse Related Services</i>					
Boarding and Training	\$1,617	\$617	\$365	\$340	\$545
Rider Education / Lessons	\$14	\$106	\$64	\$32	\$59
Stud Fees	\$336	\$80	\$29	\$57	\$80
Shoeing / Farrier	\$224	\$197	\$171	\$150	\$177
Veterinary Services	\$558	\$258	\$202	\$200	\$251
All Other Horse Services	\$160	\$42	\$27	\$46	\$49
<i>Transportation and Travel</i>					
Trailer and Horse Transport	\$227	\$167	\$136	\$140	\$153
Travel and Transportation	\$173	\$197	\$143	\$157	\$161
<i>General Operating Expenses</i>					
Entry Fees	\$118	\$145	\$40	\$107	\$88
Facilities Maintenance	\$286	\$172	\$124	\$137	\$155
All Other Business Expenses	\$268	\$123	\$70	\$96	\$109
<i>Salaries</i>					
Employee Compensation (Wages and Non-Cash)	\$530	\$131	\$46	\$111	\$132
<i>Taxes</i>					
Federal Taxes	\$102	\$50	\$31	\$46	\$46
State Taxes	\$50	\$23	\$15	\$23	\$23
Local Taxes	\$49	\$17	\$13	\$13	\$18

This table illustrates a few important industry characteristics. For instance, and as mentioned on page 11, the expenses incurred from owning a typical horse exceed the revenues realized from the same horse. In this instance, the annual revenues realized are only approximately \$1,200, while the expenses are approximately \$2,900, over 240% larger than revenues.

One should note that while the figures represent average revenue and expense amounts, they may not be typical amounts—for example, horse sales revenues are usually \$0, but the average is obviously higher.

It is important to recognize that [Table 16](#) shows per horse data based on industry averages. Some of the key highlights:

On a per horse basis:

- Racing horses have annual expenses exceeding revenues by approximately \$1,500.
- Showing horses have annual expenses exceeding revenues by approximately \$2,000.
- Recreation horses have annual expenses exceeding revenues by \$1,800.

On average, across all breeds and segments, the annual expenses associated with a horse exceed revenues by approximately \$1,700. This per horse revenue and expense analysis indicates that horse ownership is generally not undertaken as a profit making operation.

The revenue and expenses characteristics of operating a typical horse show differ from individual horse ownership. Table 20 summarizes the revenue and expenses associated with a single horse show.

Consistent with the approach applied to horse ownership, this table provides information based upon industry averages. Revenues and expenses for horse shows may vary widely based upon size of the show, geographic location and number of participants.

Table 20
Horse Show Revenue and Expense, per Show

<i>Activity</i>	<i>Total</i>
Revenue	
Admissions, Concessions, Parking and Programs	\$19,067
Sponsors and Advertising	\$29,975
Entry Fees	\$71,192
Stall Rentals	\$19,039
All Other Revenue	\$19,451
Expense	
<i>General Operating Expenses</i>	
Cash Prizes	\$57,862
Facilities Maintenance	\$7,799
Equipment, Vehicle and Facility Rental	\$22,436
All Other Business Expenses	\$15,588
Salaries, Wages and Benefits Paid	\$31,451
<i>Taxes</i>	
Federal Taxes	\$411
State Taxes	\$101
Local Taxes	\$93

A typical horse show operates at a profit of approximately \$23,000 based upon revenues of \$159,000 and expenses of \$136,000. Entry fees are the largest and most important revenue stream for horse shows, and directly link to the amount that a horse show can pay to the participants in cash and prizes. It is also important to recognize that the economic impacts from horse shows are not just generated from the profit, but from all of the expenses associated with the horse show as well.

Race tracks are generally the most commonly thought of revenue generating mechanism in the horse industry. The table below summarizes the revenues and expenses incurred at a typical racetrack.

Table 16
Race Track Revenue and Expense, per Track

<i>Activity</i>	<i>Total</i>
Revenue	
Admissions, Concessions, Parking and Programs	\$2,627,685
Total Wagering	\$19,572,914
All Other Revenue	\$8,608,083
Expense	
<i>General Operating Expenses</i>	
Veterinary Services	\$888,615
Facilities Maintenance	\$613,925
Salaries, Wages and Benefits Paid	\$3,965,001
Equipment, Vehicle and Facility Rental	\$7,139,258
All Other Business Expenses	\$7,242,897
<i>Taxes</i>	
Federal Taxes	\$1,343,621
State Taxes	\$6,640,614
Local Taxes	\$917,825

A typical track operation has revenues of approximately \$30.8 million and expenses of approximately \$28.8 million, including tax obligations. It is important to note however that the racetrack profit estimated for each track is not necessarily revenues minus expenses (as collected and defined in the survey). Depending on geography, each track has different financial obligations at both the local and/or state levels as to what they are required to pay, either as a percentage of net profits or as a percentage of gross revenues or both.

Clearly, racetrack operations are a key contributor to tax coffers as a typical track pays almost \$9 million per year in annual taxes. The tax revenues included in this table do not reflect all of the additional sales taxes many tracks (e.g. merchandise, concessions) are required to pay within their respective states.

V. The Role of Breeding in the Horse Industry

Racing can be broken down into three tiers of production: racetrack operation/OTB facilities, maintaining competitive and potentially competitive horses, and breeding, which included maintaining potential and retired breeding horses. Each tier is dependent on the other tier for its income. For instance, tracks and OTBs generate revenue from the general public which attends and/or wagers upon competitive racing horses, owners of competing horses derive their income from the racetracks in the form of purses, and breeders derive their income by selling horses to owners who want to own and enter horses into a competition.

Breeding plays a significant role in the racing industry. For instance:

- Approximately 430,000 horses are involved in the breeding process or are transitioning into or out of the breeding process – in the racing sector alone.
- Breeding horses in the racing segment produce a direct impact for the industry of approximately \$2.5 billion and a total impact of almost \$6 billion.
- Approximately 39,000 full-time equivalent jobs are created directly from breeding activity, a total of approximately 100,000 FTE jobs are created when considering the indirect and induced impacts.

Measures of the Racing Sector by Tier of Production

<i>Tier</i>	<i>Number of Horses</i>	<i>GDP Contribution⁽¹⁾</i>	<i>GDP Impact⁽¹⁾</i>	<i>FTE Jobs Provided</i>	<i>FTE Jobs Generated</i>
Track and OTB Operation		\$5,382	\$11,653	42,257	126,190
Competing Horses	416,708	\$3,068	\$8,507	65,792	158,350
Breeding Horses	427,823	\$2,247	\$5,964	38,575	99,286

(1) Numbers shown in millions

Breeding also plays a significant role in the showing industry segment. While the showing segment may not have the national public attention that races like the Kentucky Derby or the Breeders Cup generates for the racing industry, the showing segment features thousands of local, regional and national shows. Competitive horse shows have many of the same dynamics as racing, shows require horses to compete for prizes, and horses are bred specifically for the purposes of becoming a competitive show horse.

**Table 23
Measures of the Showing Sector by Tier of Production**

<i>Tier</i>	<i>Number of Horses</i>	<i>GDP Contribution⁽¹⁾</i>	<i>GDP Impact⁽¹⁾</i>	<i>FTE Jobs Provided</i>	<i>FTE Jobs Generated</i>
Competing Horses	2,015,378	\$8,052	\$21,714	58,629	270,855
Breeding Horses	703,577	\$2,277	\$6,055	33,864	93,689

(1) Numbers shown in millions

Table XX illustrates the significant role breeding plays the showing segment. For instance:

- Approximately 705,000 horses are involved in the breeding process or are transitioning into or out of the breeding process – in the showing sector alone.
- Breeding horses in the racing segment produce a direct impact for the industry of approximately \$2.3 billion and a total impact of almost \$6.05 billion.
- Approximately 34,000 full-time equivalent jobs are created directly from breeding activity, a total of approximately 94,000 FTE jobs are created when considering the indirect and induced impacts.

Clearly the maintenance of competitive horses and the breeding of horses for the purpose of competition is a significant contributor to the overall impacts generated by the horse industry. When considering the racing and showing segments in combination with one another, the total impacts from breeding are even more pronounced.

Measures of the Racing and Showing Sector by Tier of Production

<i>Tier</i>	<i>Number of Horses</i>	<i>GDP Contribution⁽¹⁾</i>	<i>GDP Impact⁽¹⁾</i>	<i>FTE Jobs Provided</i>	<i>FTE Jobs Generated</i>
Track and OTB Operation		\$5,382	\$11,653	42,257	126,190
Competing Horses	2,432,086	\$11,120	\$30,221	124,421	429,205
Breeding Horses	1,131,400	\$4,524	\$12,019	72,439	192,975

(1) Numbers shown in millions

- Approximately 1,130,000 horses are involved in the breeding process or are transitioning into or out of the breeding process.
- Breeding produces a direct impact for the industry of approximately \$4.5 billion and a total impact of almost \$12. billion for the horse industry.
- Approximately 72,000 full-time equivalent jobs are created directly from breeding activity, a total of approximately 193,000 FTE jobs are created when considering the indirect and induced impacts.

As part of the survey process, horse owners were asked to identify whether their horses were used primarily for breeding, competing or for a different purpose. Depending on how the owners classified their respective horses, the owner revenue and expenses could be allocated either the breeding, competing or other classification category. This attribution of expenses was necessary in estimating the economic impacts and employment associated with each of the activities.

The appropriate classification of a horse during certain transition periods is not always clearly defined. For instance, young horses such as foals, weanlings, yearlings and two-year olds are ultimately expected to race eventually. However, as they have yet to start competing, their appropriate classification can be debated. For purposes of this study, the

survey respondents were relied upon to determine the appropriate classification of each horse.

The number of horses involved in these activities was weighted appropriately to develop estimates for the entire horse population, consistent with other activities throughout the report and described in the Technical Documentation located in the appendix.

VI. Comparative Analysis of Break-Out States

As part of the economic impact study of the U.S. Horse Industry, state specific data and additional economic impact estimates were generated for a number of “break-out” states. Those states that contributed to the funding of the economic impact initiative were selected as break-out states. Individual break-out state reports contain economic impact and demographic data relevant to each respective state.

The following table provides a state-by-state comparison highlighting a few key economic indicators and industry characteristics.

State	Rank Among Breakout States							
	Total Effect on GDP		Number of Horses		Number of Industry Participants (2)		Total Effect on Full-Time Equivalent Employment	
	Magnitude ⁽¹⁾	Rank	Count	Rank	Count	Rank	Employment Effect	Rank
California	\$6,972	1	698,345	2	311,119	3	130,470	1
Colorado	\$1,569	9	255,503	8	102,417	9	21,325	14
Florida	\$5,156	3	500,124	3	439,963	2	105,061	2
Indiana	\$1,316	10	202,986	9	89,977	11	22,556	12
Kentucky	\$3,548	4	320,173	5	194,275	4	96,179	4
Louisiana	\$2,455	5	164,305	11	54,170	14	24,608	11
Maryland	\$1,570	8	152,930	12	65,620	12	28,784	10
Missouri	\$1,287	12	281,255	7	125,131	7	56,082	5
New Jersey	\$1,149	13	82,982	15	55,897	13	21,380	13
New Mexico	\$761	14	147,181	13	91,136	10	45,009	6
New York	\$2,394	6	201,906	10	152,030	6	35,773	8
Ohio	\$2,203	7	306,898	6	181,660	5	43,037	7
Oklahoma	\$1,305	11	326,134	4	117,886	8	32,613	9
Texas	\$5,230	2	978,822	1	455,649	1	97,041	3
Wyoming	\$289	15	99,257	14	33,069	15	4,912	15

(1) Numbers shown in millions

(2) Does not reflect industry participants under the age of 18.

Horse Counts:

- Texas, with almost 1 million horses (978,822), has more horses than any other state.
- California and Florida each have over ½ million horses, with 698,345 and 500,125 respectively.
- The 15 break-out states represent over 51% of the U.S. horse population

Total Effect on GDP

- The total effect on GDP is a factor of both the number of horses within a state, in conjunction with the number of racetracks and shows. As the table illustrates, there is a direct correlation in many states between the rank number of horses and the total effect on GDP. For instance, Texas and California rank 1 & 2 respectively in the number of horses, and 1 & 2 in the total GDP contribution. While California has fewer horses than Texas, it has significantly more racetracks which generates additional economic impact. Kentucky, New Mexico, Colorado and Wyoming all have essentially the same GDP ranking as horse ranking. States such as Louisiana, New York and Maryland have a greater impact on GDP than each state’s comparatively lower horse ranking due in large part to the significant presence of racing in that state.

- The 15 break-out states represent approximately 37% of the total horse industry U.S. GDP contribution.
- All but two of the break-out states annually contribute at least \$1 billion to the U.S. GDP, with seven states contributing \$2 billion or more

Industry Participants

Industry participants are not inclusive of individuals 17 years or younger as they were excluded from the survey sample

- Consistent with total horse count, Texas, Florida and California all have the most industry participants.
- The break-out states represent 53% of the total U.S. participation in the horse industry

Total Effect on FTE Employment:

- More jobs are created in California (130,000) from horse industry activity than any other state
- The horse industry creates approximately 96,000 jobs in the State of Kentucky, the 4th highest of all U.S. states and approximately 40,000 more jobs than the next closest state (Missouri)
- With the exception of Wyoming (a state with a very small population), every state in the break-out sample has at least 20,000 jobs generated by the U.S. horse industry, with seven states having at least 40,000 jobs generated by the horse industry.

Additional information is available for each of the states included in the comparative table. State break-out summaries are available upon request from the American Horse Council Foundation.

VII. Electronic Gaming & Wagering

Racetrack respondents were asked to indicate a presence of electronic & internet wagering at their respective facility. The following tables summarize the racetracks willing to answer these questions. It is important to remember that survey respondents were asked to report information as of 2003, so some tracks (e.g. New York) that currently provide these alternative gaming options may not have introduced this form of wagering as of 2003.

The table below illustrates the number of racetrack respondents offering electronic wagering. For purposes of this survey, electronic wagering was defined as Off-track betting technology that allows for wagering by way of cable, phone, wire, or any other technology (excluding Internet) that is remote from the racetrack site. Racetracks electing not to respond to this question were omitted.

Number of Race Tracks Using Electronic Wagering Technology

	<i>Count</i>	<i>Percent</i>
Use	12	32.43%
Do Not Use	25	67.57%
TOTAL	37	100.00%

The twelve racetracks above that reported the use of electronic wagering, indicated the revenue their respective track realized from this form of wagering ranged from 1% to 90% annually.

Racetracks were also queried about the presence of electronic gaming machines at their tracks. For purposes of this survey, electronic gaming machines were defined as slot machines, video lottery terminals (VLT), video poker, instant racing, electronic pull-tabs, electronic keno or any other video based electronic gaming machines. As shown, approximately 19% of responding tracks provided some form of electronic gaming option. Of those tracks offering electronic gaming machines, 4 of the 7 indicated that there tracks received 70% or more of their total revenue from this form of wagering.

Number of Race Tracks Using Electronic Gaming Machines

	<i>Count</i>	<i>Percent</i>
Use	7	18.92%
Do Not Use	30	81.08%
TOTAL	37	100.00%

Tracks were asked to indicate whether internet wagering was offered through the racetrack. For purposes of this study, internet wagering was defined as off-track betting technology that allows for wagering through the Internet or closed-loop online system by way of personal computer or hand-held device or any other technology (excluding phone betting) that is remote from the racetrack site.

Number of Race Tracks Using Internet Wagering

	<i>Count</i>	<i>Percent</i>
Use	7	18.92%
Do Not Use	30	81.08%
TOTAL	37	100.00%

According to the table above, 19% of the racetrack respondent sample offered some form of internet wagering. Six of the seven tracks providing internet wagering reported that the percentage of total revenues collected through internet wagering was 5% or less. One track reported that internet wagering represented 13% of total wagering revenue.

Capturing Gaming Machine and Electronic Wagering in the Economic Impact Analysis

As part of the survey process, each racetrack was asked to provide the following key revenue items:

- Wagering revenue from Thoroughbred, Quarter Horse and Standardbred/Other breed racing respectively
- Total handle from Thoroughbred, Quarter Horse and Standardbred/Other breed racing respectively
- Revenue from admissions, concessions, parking and programs
- “Other” revenue

In the process of analyzing revenue information, it became apparent that some tracks included revenues from electronic gaming (if provided at the track), while others tracks did not, sometimes for reasons of confidentiality. Therefore, it was difficult to determine from survey responses the total amount of wagering revenue realized from sources such as Video Lottery Terminals and Slot machines. In addition, many of the tracks that responded to the survey did not offer an alternative form of wagering. Therefore, the sample of tracks was too small to make meaningful statements specifically about the use of electronic gaming for the entire industry.

In an attempt to further analyze this alternative form of horse-related gaming, additional industry sources were assessed in lieu of adequate survey data. A combination of industry sources such as the International Gaming & Wagering Business, was used to estimate total wagering revenue generated from alternative gaming sources. From the available information it was difficult to determine which revenues from alternative gaming sources were attributable to the horse industry (for instance, a VLT located at a racetrack would be considered part of the industry, while a VLT at a greyhound track would be considered out of the industry), and which revenues were generated from non-industry related sources.

Analyzing wagering revenue estimates available through industry sources did confirm that the participating tracks did in fact include revenue attributable to alternative forms of gaming in the “other” revenue section of their survey.

Based on conversations with the Project Steering Committee and other industry sources, Deloitte used available resources to estimate the total wagering revenue at those racetracks that did not participate in the process. The wagering revenue included for purposes of estimating the economic impacts was inclusive of the wagering revenue generated from alternative forms of gaming at the racetracks. However, the economic impacts included in this study are not inclusive of all wagering revenue generated by electronic gaming within a specific state.

Because of the way the data was provided during the survey process, and the manner in which data is available through industry sources, the economic impacts compiled and aggregated as part of this process can not be segmented in such a fashion to distill the economic impacts generated exclusively through electronic forms of gaming at racetrack locations.

VII. Data Gathering Sources and Approach

Four different survey tools were used as the primary data collection mechanism to develop the economic analysis and to generate economic impacts. All survey respondents were asked to report 2003 spending information; the survey portion of the study was conducted primarily during 2004 and survey recipients would not have had the benefit of a 2004 tax return.

In general, industry participation in this study was comparably strong when compared to the 1996 study. For example, 27,951 horse owners/service providers participated in the survey process, with 18,648 individuals providing complete and usable surveys. This is an increase of approximately 400% from the total number of participants in 1996.

The Project Methodology section provides a summary of how the survey process was conducted, including the solicitation approach, the development of the survey tool, survey distribution(s), and data analysis of collected survey information. In this chapter, we have provided an abridged version of this process.

Survey Approach – All Survey Segments

The 1996 study relied exclusively on the use of hard copy surveys to collect data from each of the four horse industry sub-segments (e.g. horse owner/service providers, racetracks, off-track betting organizations, and horse show managers/organizers). For this project, the Project Steering Committee assessed opportunities to improve the process by which surveys were distributed and collected, as well as the actual survey instrument itself. After careful consideration, it was determined that the 2004 study would use an electronic-based surveying approach as its primary data collection mechanism.

However, the Project Steering Committee was sensitive that all members of the sample population(s) may not have a readily available computer on which to complete the survey. Therefore, each person/organization in the survey sample were also provided with an opportunity to request a hard copy survey, complete the survey by hand, and return their survey in a business reply envelope or by facsimile.

The Postcard-Invitation Approach

Several different approaches to solicit participation from each industry segment were carefully considered. After weighing the potential options, the chosen approach included the usage of a postcard invitation. This postcard invitation served as the primary mechanism by which each individual/organization would be initially contacted and asked to participate in the study.

Survey Content and Development:

The collection of meaningful primary data is a critical component of any economic impact analysis. The quality of primary data is dependent upon the quality of the tool used to collect the data. The 2004 survey(s) contained many of the same areas of focus as

the 1996 surveys, while placing additional emphasis on areas such as survey length/convenience and respondent understanding. The development of the survey tools was a collaborative effort between Deloitte and the Project Steering Committee.

Specifically, each survey was designed to collect operating and financial information relevant to each of the four industry segments. For example, racetracks were asked to provide itemized revenue and expenses, on and off-track handle, attendance, employees, type and number of races hosted, value of assets, capital expenditures taxes paid, and other pertinent financial/operational information. The OTB survey was similar in nature to the racetrack survey, without the questions pertinent to race-days and attendance.

The Horse Show Manager/Organizer survey focused on the operational characteristics of the horse show(s) the individual managed/organized. Questions focused on types of shows, number of employees, number of attendees, average show length, number of horses, taxes paid, as well as an itemized list of revenues and expenses.

The Horse Owner/Service Provider contained the most questions of the four surveys. This survey focused upon the respondent's primary role in the industry, the activities the owner/supplier engages in within the industry, the number and type of horses owned, their ownership status (sole, shared, syndicate), horse-related capital expenses and value of horse-related assets, number of employees (if any), the primary use of their horses, taxes paid, as well as asking for an itemized list of revenues and expenses pertinent to all of their horse-related activities. This survey also asked a series of demographic questions useful in developing a profile of the horse owner/service provider segment.

All four of these hard copy survey tools are included in the Project Methodology Appendix.

Collecting Names for the Survey Sample:

An industry-wide and representative list of names for each of the four industry segments did not exist, so Deloitte and the Project Steering Committee set out to create a comprehensive database of owner/supplier names based on the compilation of state and association membership lists.

After a 12 week period, Deloitte had gathered membership information from approximately 80 different Horse Owner/Service Provider organizations and affiliates. This membership list collection process was considered very successful, considering only 20 organizations participated in the 1996 study. In addition, the Horse Show list was generated from the combined lists of 13 different showing organizations, also considered a success. The OTB and Racetrack lists are more static (e.g. the number of racetracks and OTBs remains relatively consistent year-to-year) and were generated from information maintained by the Project Steering Committee and from Equibase.

Once a consolidated list of names and addresses was compiled from each of the respective lists, the information had to be cleansed and validated, including the removal of all duplicate entries (as each database, particularly the Horse Owner/Service Provider database, was the compilation of many different membership lists, an individual or organization might belong to several different membership organizations making it likely than certain names might appear on more than one list).

Once the data cleansing/validation process was completed, including the removal of duplicate entries, each database contained the following number of usable names/addresses.

**TABLE VII-1
Number of Usable Addresses Before and After Removal of Duplicates**

	<u>Before</u>	<u>After</u>
Racetrack	607	238
Horse Show	10,615	4,028
OTB	616	602
Horse Owner/Service Provider	1,694,099	1,367,543

MIKE – I NEED YOU TO PROVIDE THE CORRECT TABLE ABOVE. I KNOW THINGS HAVE CHANGED FROM THE TIME I ORIGINALLY CREATED THIS. ALSO, PLEASE COMBINE THE RACETRACK AND OTB ROWS INTO A SINGLE ROW.

Survey Sampling Approach for Racetrack, OTB and Horse Shows

An *exhaustive* sampling approach was used for the OTB, Racetrack and Horse Show industry segments. In an exhaustive sampling approach, every name/organization included in the database receives a solicitation to participate. An exhaustive sampling approach could be used in this instance as each segment had a relatively small number of names/organizations in their respective samples (when compared to the Owner/Supplier sample), and therefore the associated postage, printing and distribution costs were within the project budget. In addition, each of these industry segments has a finite universe. In other words, the total number of OTB outlets, racetracks and horse shows is easier to identify than the number of horse owners and horse industry service providers. These industry segment characteristics were conducive to the use of this exhaustive sampling approach.

Survey Distribution and Follow-Up

Postcard invitations were sent to every individual/organization in the sampling frame over the period of five days. An on-line reporting tool was developed to monitor survey returns, with electronic surveys being tabulated instantaneously once submitted through the internet.

Several weeks following the initial postcard invitation distribution, it was determined that additional responses were needed. It was determined that administering the survey over the telephone was going to be the most direct and aggressive approach to stimulate survey response. Every racetrack, OTB and Horse Show for which we had a phone number received at least one phone call in an attempt to secure their participation.

In addition, states require that OTBs and racetracks disclose operating and financial information to the appropriate regulatory agencies. We were able to supplement the data received from the survey process with the financial and operating data available in publicly available sources, as well as from interviews with individuals at the racetracks and with other racing experts. The data analysis is explained in greater detail in the Project Methodology section.

Survey Sampling Approach for Horse Owners/Industry Suppliers

The Horse Owner/Service Provider segment necessitated a different survey sampling approach. For this sample, a *stratified random sample* was selected from the 747,400 names. We divided horse owners and industry participants into two basic groups: economically motivated owners/participants and recreational owners/participants. This is comparable to the structure that was used in the 1996 study. We assumed a comprehensive sampling frame for the economically motivated industry participants and a representative sampling frame for the recreational participants.

The individuals for both sampling frames came from the numerous association and commercial lists that were collected for this purpose. The economically motivated participants come from lists tied to specific breeds (e.g. American Quarter Horse Association) and from other horse-related associations (e.g. New Jersey Horse Council). The recreational owners are based on the lists that are associated with retail or commercial outlets (e.g. HorseCity.com). The methodology for determining the population of recreational owners will be described in a later document (see also the 1996 study for a description of the basic framework).

There are two issues that need to be considered in preparing the lists for drawing the sample: the removal of duplicate names and the construction of sampling strata. The first issue is a matter of making a unique database from the various lists collected. The lists contain a number of duplicate names and addresses (i.e. the same individual appears on different lists) and we wanted to assure that each individual selected only receives one copy of the survey. The second issue is related to making meaningful statements for each of the specific breakout groups (breed and state). To facilitate this process, we will break the overall sample into strata and select the sample based on these.

The lists are grouped into the following categories

- 1) Thoroughbred Lists
- 2) Quarter Horse Lists
- 3) Other Breed Lists
- 4) Non-Breed Association Lists
- 5) Retail/Commercial Lists

The mapping of the individual lists to their specific group is shown in Table X. The removal of duplicate records is based on the hierarchy described above. For example, if an individual appears on both the Thoroughbred list and the Quarter Horse list, the name will only be drawn from the Thoroughbred list strata. This does not necessarily imply that the individual has a lower chance of being selected into the sample (it could actually be higher) or that the individual will not be asked about horses of all breeds. The order of the hierarchy was chosen to ensure that adequate numbers of each breed was included in each strata. For example, since the overall list of horse owners includes a comparatively small sample of participants from the Thoroughbred lists, it was important to put this list at the top of the hierarchy to ensure adequate representation of this group.

Survey Distribution and Follow-Up

As with the other industry segments, postcard invitations were sent to every individual/organization in the sampling frame over the period of five days.

Several weeks following the initial postcard invitation distribution, it was determined that additional respondents were required. Unlike with the other survey segments, telephone follow-up was not a viable option due to the size of the Owner/Provider sample, and the number of additional responses desired. Therefore, for the Horse Owner/Service Provider sample, an email solicitation was initiated to a larger sample to generate additional response.

Prior to the email distribution, we confirmed that a sampling bias was not being introduced into the survey frame by excluding those horse owners/service providers without an email record. Of the approximately 747,400 Owners/Suppliers, we had approximately 240,000 email records. In addition, the horse owners/service providers that received a postcard invitation AND had an email address received an email follow-up/reminder to complete their survey.

This phase two approach was successful at stimulating additional response from the horse owner/service provider sample. The email solicitation increased the total number of responses from approximately 4,500 to approximately 19,650. The final number of participating horse owners/service providers is approximately 400% greater than the total number of responses (4,759) received in the 1996 version of this study.

The following table summarizes the survey return process: