



The Economic Impact of the Equine Sector on South Carolina



**A report by the
University of South Carolina
For
The South Carolina
Department of Agriculture**



**UNIVERSITY OF
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South Carolina Horsemen's Council

SC Upstate Equine

SC Farm Bureau

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Introduction

Although only a small percentage of Americans own horses, the U.S. equine industry is a significant component of the U.S. economy. The economic activity involved in caring for the roughly 7.2 million horses in the United States along with all of the spending by horse enthusiasts on horse-related events and recreation generates a total annual economic impact of more than \$215 billion, which supports 1.7 million U.S. jobs.¹ In South Carolina, the equine industry has a long history, as the Palmetto State serves as an attraction for horse owners and enthusiasts largely due to its climate and soil conditions that enable year-round horse activities as well as the land availability that is only accessible in the relatively rural American states. South Carolina is known for racehorse training, polo, fox hunting, showing, and trail riding.

The purpose of this study was to specifically quantify the economic impact of the equine sector on South Carolina. The study examined both of the primary factors that generate economic activity within the state's equine sector – the spending by horse owners in service of the care of their horses, and the ongoing business activities of horse-related institutions.

Methodology

The impact of any economic sector on a local region is driven by the local spending activity of businesses within that sector. Specifically, horse-related businesses and organizations in South Carolina's equine sector inject new dollars into the state via their purchasing activity – that is – expenditures they make on a variety of materials and inputs from local suppliers as well as through wages and salaries paid to employees. This spending activity then ripples through the state's economy and is translated into new jobs and additional income. The demand for these horse-related businesses and organizations ultimately comes from both in-state and out-of-state horse owners and horse enthusiasts². For example, horse owners will likely require regular veterinary care while many horse enthusiasts will hire instructors to learn how to ride recreationally.

There are three specific types of economic impacts that can be measured from an initial increase in demand resulting from spending activity: direct, indirect, and induced. The direct impact simply refers to an initial change in economic activity. For example, the veterinary care that horse owners must provide to their horses creates local, direct demand for veterinarian firms. This direct impact would then lead to a series of indirect effects, which refer to the additional rounds of spending activity that occur due to inter-industry linkages between other local firms within South Carolina. For example, if one of the veterinarian firms cited above experienced an increase in demand, this would lead it to purchase additional supplies such as medical equipment. The medical equipment vendor, in turn, would then experience an increase in demand and be required to purchase additional inputs from its own suppliers, and so on. If the increase in demand is high enough, these suppliers may also have to hire new workers in addition to buying more supplies. These indirect effects spread across many industries in South Carolina. The total indirect effect is a function of the size of the in-state supplier network.

¹ Source: American Horse Council Federation (2018). *The Economic Impact of the U.S. Horse Industry*

² Horse enthusiasts are generally defined as individuals who either participate in horse activities or attend horse events as spectators.

The induced effect refers to the additional economic impact that results from increases in household spending activity. For example, if the veterinary firms cited above experience an increase in demand and hire additional employees to facilitate this demand, these employees will spend part of their income in the local economy. This spending activity then sets off yet more rounds of additional local spending that generates further economic activity.

These successive rounds of indirect and induced spending activity do not go on forever, which is why each of these impacts can be quantified. In each round of spending, money is “leaked out” of the local economy for a variety of reasons. For example, firms may buy inputs from out-of-state vendors or workers may choose to save a portion of their incomes.

In order to calculate the indirect and induced effects, economic multipliers are used. To estimate the economic impact of the equine sector in South Carolina, a customized structural model (also known as an input-output model) of the South Carolina economy was used by the Division of Research. This model contains specific linkages between all industries in South Carolina and can thus accurately capture all economic multiplier effects. The input-output modeling software IMPLAN was used to calculate all reported estimates. In this study, the economic activity that is generated by the equine sector is estimated via three categories of impacts: total economic output, employment, and labor income. Each of these is summarized in Table 1 below.

Table 1 – Categories of Economic Impacts

Impact Type	Definition
Total Economic Output	The dollar value representing the total contribution to economic activity
Employment	The total number of jobs necessary to produce and deliver the goods and services as measured by total economic output
Labor Income	The dollar value representing all wages, salaries, and benefits associated with total employment

Surveying the South Carolina Equine Community

The direct spending activity among horse owners and horse enthusiasts in South Carolina was assessed by conducting a series of surveys designed to estimate the following:

- All horse owner spending associated with caring for/training horses, horse racing, horse competition, and horse recreation.
- All non-owner, horse enthusiast spending on horse-related activities, including riding lessons, trail riding, and attending races and/or competitions.

Three separate online surveys were designed by the research team and distributed to three different groups; horse owners, horse industry suppliers, and organizers of races, shows and competitions. These surveys appear in full in Appendix I.

The surveys requested detailed information on the expenditures associated with horse ownership and horse events in the state. Respondents were recruited in the following ways:

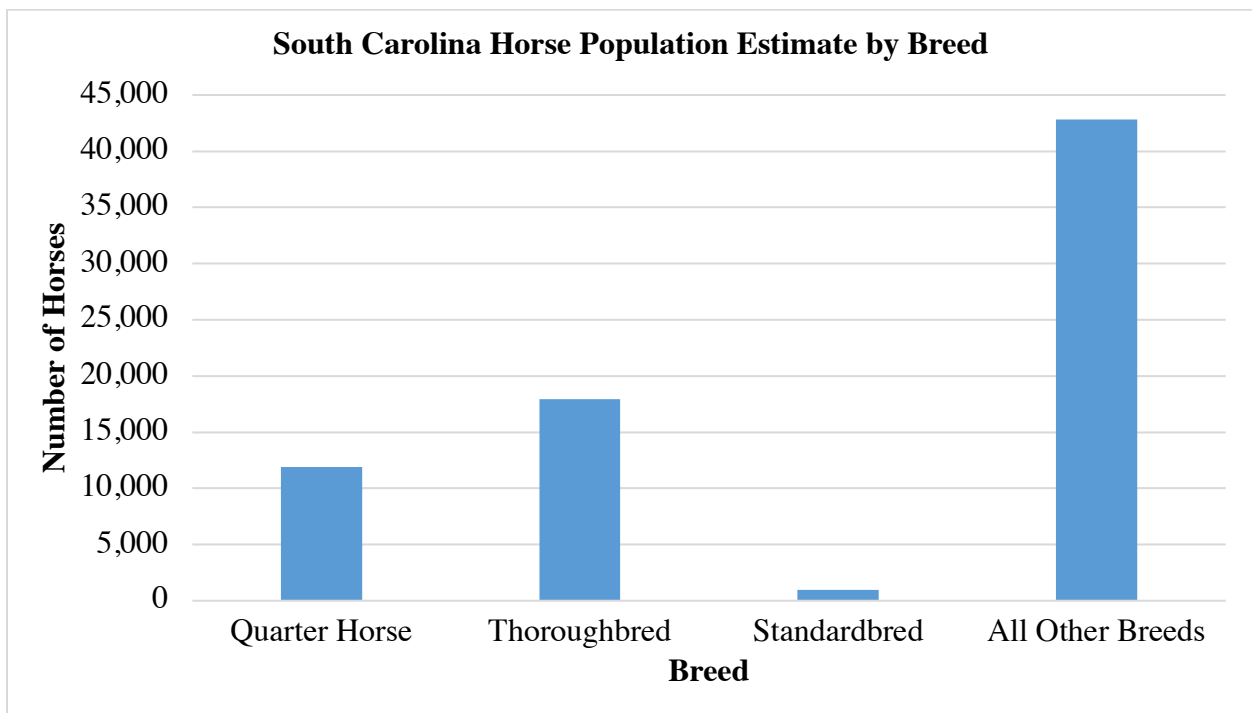
- 1) Horse owners were reached in a number of ways: several organizations like the South Carolina Horsemen's Council sent links to the surveys to their members; Aiken Chamber provided a database of 185 individuals associated with the equine sector in the county; and press releases were sent out which resulted in three newspaper/magazine articles about the surveys.
- 2) A database of horse industry suppliers was created, and each supplier was contacted individually – this group consisted of suppliers of horse-related goods (e.g. feed, tack, etc.), horse-related services (e.g. boarding, training, etc.), and horse-related transportation (e.g. trailering).
- 3) A database of horse event organizers was created, and each organizer was contacted individually by telephone or via email.

Results

The surveys resulted in responses from 524 horse owners and 88 horse-related institutions (i.e., organizers and industry suppliers). After statistically adjusting the survey results to reflect the population of South Carolina horse owners as a whole, Tables 2 to 4 highlight the summary results.

Table 2 – South Carolina Horse Population Estimate by Breed
Source: Horse Owners Survey

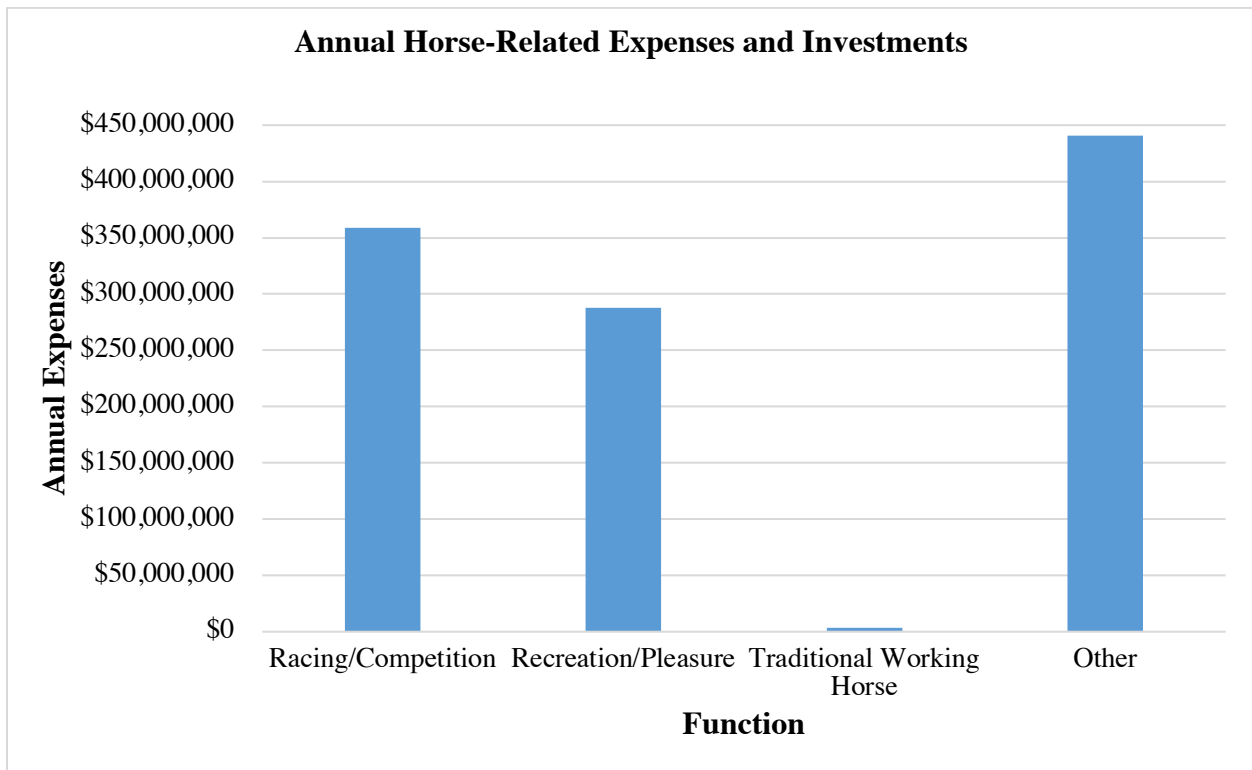
Breed	Total	%
Quarter Horse	11,878	16.1%
Thoroughbred	17,963	24.4%
Standardbred	939	1.3%
All Other Breeds	42,820	58.2%
Total	73,600	100%



According to 2018 estimates from the American Horse Council Federation, there are approximately 73,600 horses living in South Carolina. By combining this estimate with the survey responses from the Horse Owners Survey, the distribution of horse breeds was determined, as described in Table 2. Note that thoroughbred horses make up 24.4 percent of the horse population in South Carolina, followed by quarter horses at 16.1 percent.³

Table 3 – Annual Horse-Related Expenses and Investments
Source: Horse Owners Survey

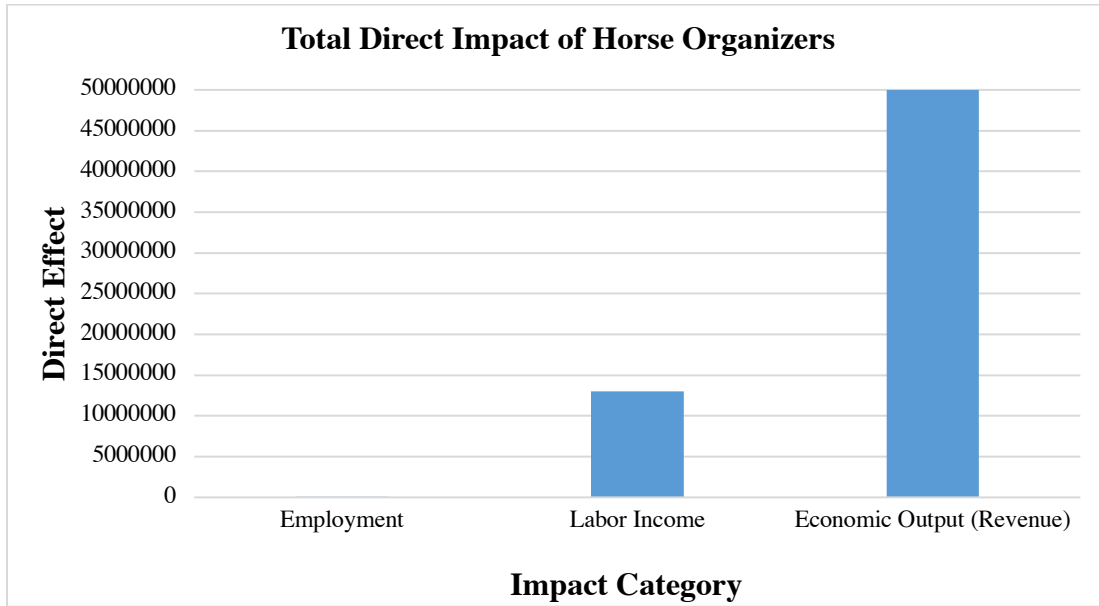
Function	Annual Expenses	%
Racing/Competition	\$358,576,740	32.9%
Recreation/Pleasure	\$287,480,435	26.4%
Traditional Working Horse	\$3,742,790	0.3%
Other	\$440,948,216	40.4%
Total	\$1,090,748,181	100%



³ Note that all horse owners surveyed reported owning a total of 2,274 horses. Under the assumption that the total number of horses in South Carolina approximates 73,600, these survey estimates can be scaled up proportionately to represent the total South Carolina horse population and horse owner spending. These scaled up figures are what appear in Tables 2 and 3.

Table 4 – Total Direct Impact of Horse Organizers
Source: Horse Organizers Survey

Impact Category	Direct Effect
Employment	748
Labor Income	\$12,979,070
Economic Output (Revenue)	\$49,997,007



Tables 3 and 4 summarize the annual total direct spending amounts associated with horse owners and horse organizers in South Carolina. Specifically, horse owners were estimated to spend approximately \$1.1 billion each year on in-state horse-related purchases, while horse organizers were estimated to generate approximately \$50 million in annual revenue and to employ 748 workers.⁴

Economic Impact: Summary Results

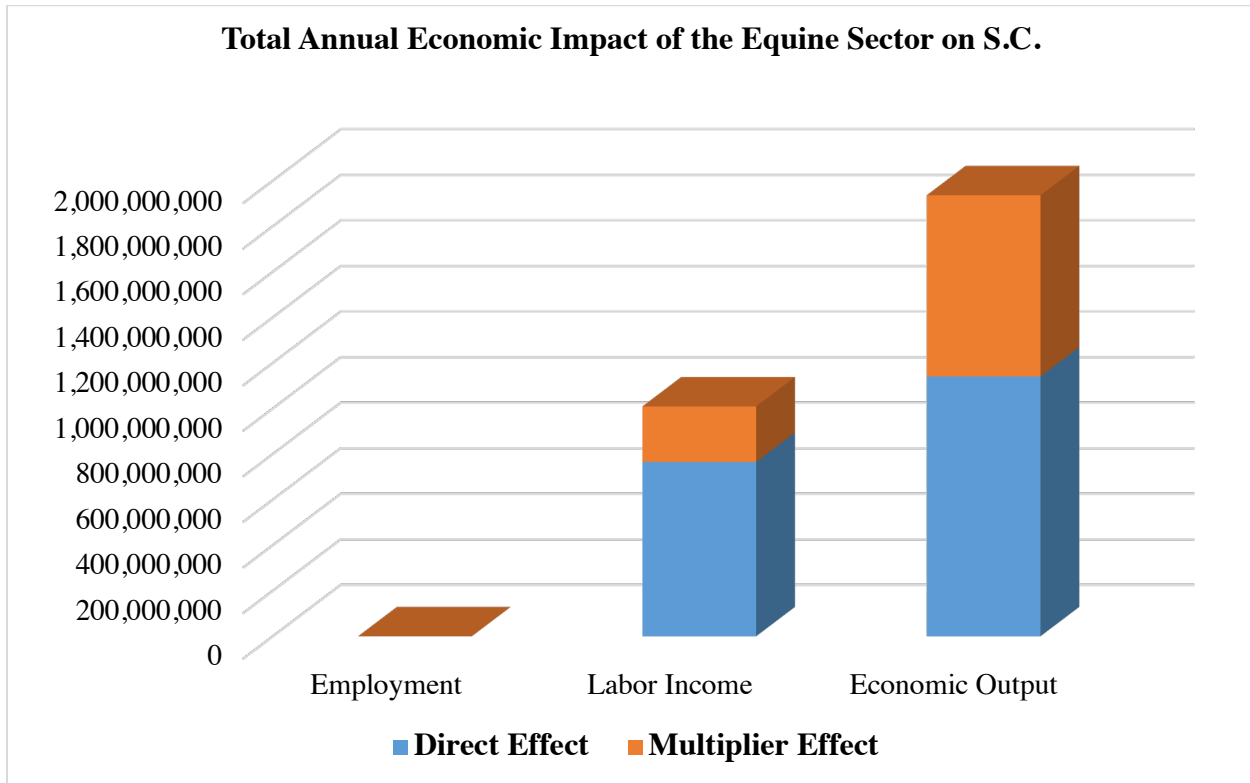
The economic activity summarized in Tables 3 and 4 above represents the total direct spending associated with all horse-related activities in South Carolina. These data can thus be used to determine the total statewide economic impact of the equine sector, which will include this direct activity as well as all of the associated economic multiplier effects. These results are highlighted in Table 5.

⁴ A separate, third survey of horse industry suppliers was also conducted by the researchers. The results of this survey were excluded, however, because a majority of the sales revenue from these businesses is already captured by including in-state horse owner spending. To avoid any double counting associated with the Horse Organizers Survey, the spending activity categories in the Horse Owners survey of “jockey fees” and “promoting horses in a breed magazine or show program” were also excluded from this analysis.

Table 5 – Total Annual Economic Impact of the Equine Sector on S.C.

	Employment	Labor Income	Economic Output
Direct Effect	22,499	\$765,460,807	\$1,140,745,188
Multiplier Effect	6,046	\$243,690,710	\$795,524,843

Total Impact	28,545	\$1,009,151,517	\$1,936,270,031



As of the end of 2018, the total annual economic impact of the equine sector in South Carolina is estimated to be approximately \$1.9 billion. This is associated with 28,545 jobs and over \$1.0 billion in labor income for South Carolinians. The \$1.1 billion in direct spending activity that is injected into the state’s economy by horse owners and horse enthusiasts every year generates approximately 22,499 direct jobs and \$765 million in labor income. Businesses experiencing an increase in demand from this direct spending, in turn, purchase additional supplies from their vendors (the indirect effect) and hire additional workers who then spend part of their incomes in the local economy (the induced effect). Together, these subsequent rounds of spending activity – known as the economic multiplier effect – generate an additional 6,046 jobs and nearly \$244 million in economic activity.

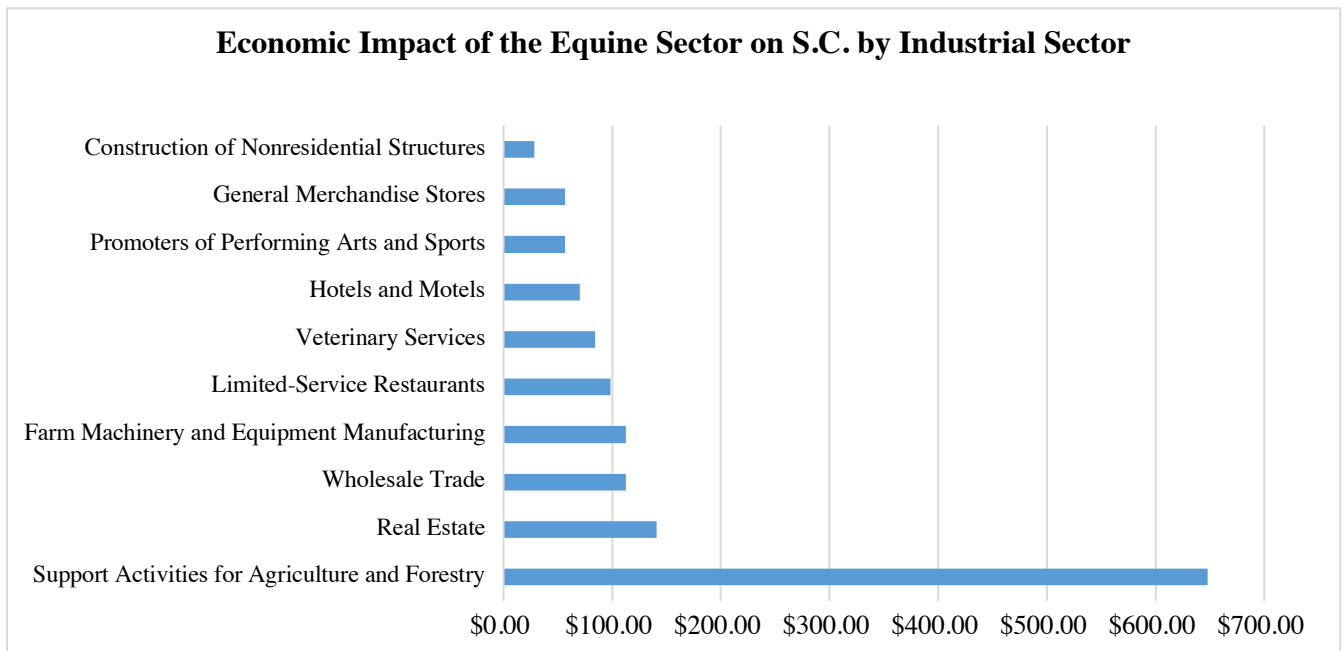
These estimates are also in line with what might be expected given the relative concentration of horses in South Carolina compared to the United States. For example, about 1.0% of all horses in the United States reside in South Carolina - and the estimates in Table 5 imply that that total economic impact of the equine sector in South Carolina represents roughly 0.90% of the United States total impact as previously documented by the American Horse Council Federation in 2018. By contrast, the economic impact of the equine sector in North Carolina - a state that doesn't have as many major horse-related events (relative to its overall size) - comprises about

1.6 percent of the equine industry's impact on the United States despite containing 2.86 percent of the United States' horse population.⁵

The economic impact of the equine sector also extends to many industrial sectors. Table 6 highlights the 10 most impacted sectors in South Carolina and the annual economic activity associated with each.

Table 6 – Economic Impact of the Equine Sector on S.C. by Industrial Sector
 Note: In Millions of Dollars

Support Activities for Agriculture and Forestry	\$648.1
Real Estate	\$140.9
Wholesale Trade	\$112.7
Farm Machinery and Equipment Manufacturing	\$112.7
Limited-Service Restaurants	\$98.6
Veterinary Services	\$84.5
Hotels and Motels	\$70.4
Promoters of Performing Arts and Sports	\$56.4
General Merchandise Stores	\$56.4
Construction of Nonresidential Structures	\$28.2



⁵ Source: American Horse Council Federation (2018). *The Economic Impact of the U.S. Horse Industry*

Economic Impact: Detailed Results

The economic impact of South Carolina’s equine sector can also be broken down by horse breed and horse function, as denoted in Tables 7 and 8. Note that the total results in these tables only include the impacts arising from horse owners.

Table 7 – Total Annual Economic Impact of Horse Owners on S.C.: Economic Output

Note: In Millions of Dollars

	Racing & Competition	Recreation & Pleasure	Traditional Working Horse	Other	Total
Quarter Horse	\$46.69	\$92.07	\$1.31	\$97.28	\$237.35
Thoroughbred	\$168.83	\$102.33	\$0.80	\$160.73	\$432.69
Standardbred	\$3.62	\$3.48	\$0.00	\$14.43	\$21.53
All Other Breeds	\$386.85	\$287.96	\$4.22	\$469.65	\$1,148.68
Total	\$605.99	\$485.84	\$6.33	\$742.09	\$1,840.25

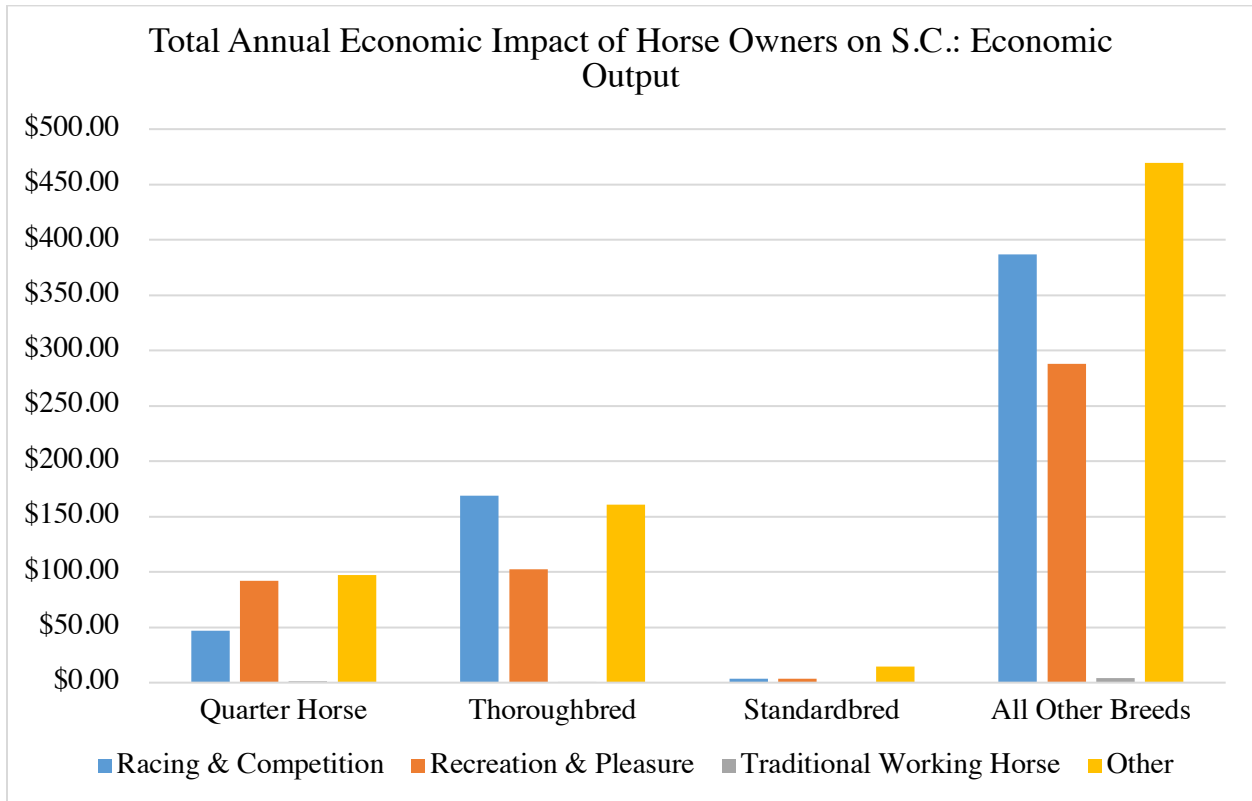
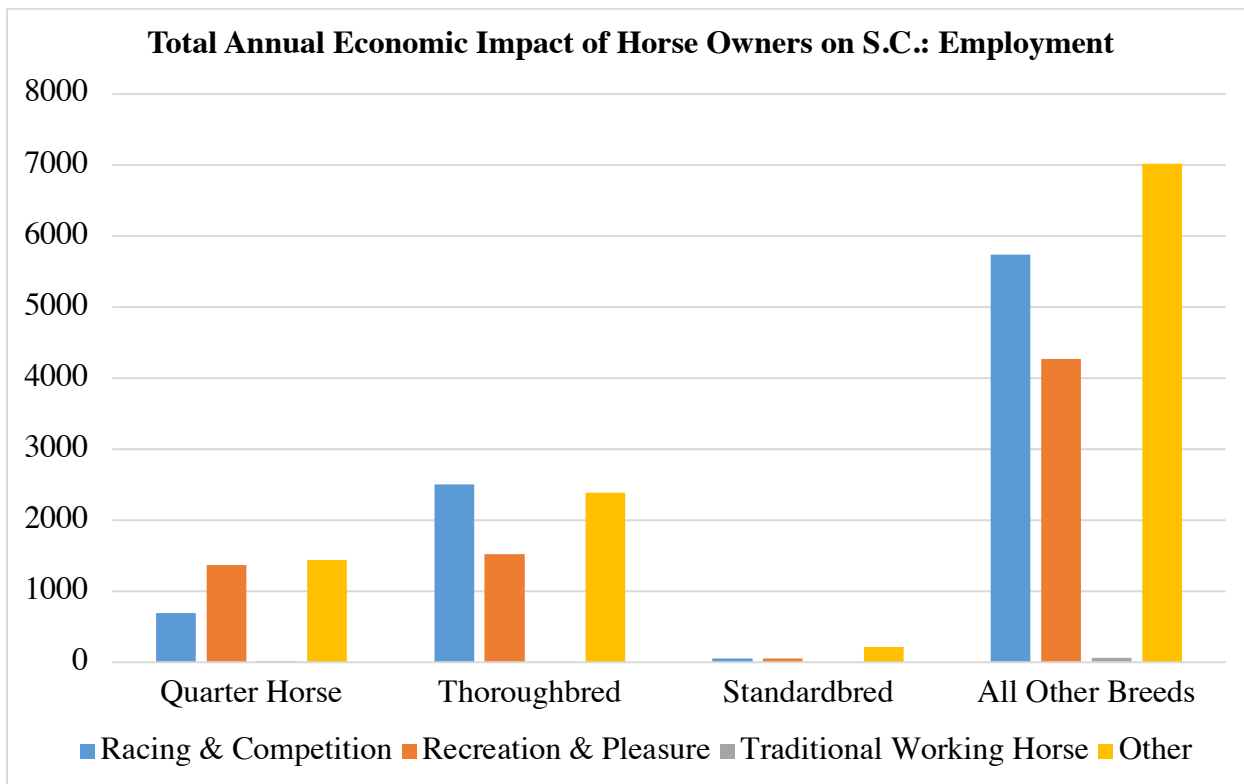


Table 8 – Total Annual Economic Impact of Horse Owners on S.C.: Employment

	Racing & Competition	Recreation & Pleasure	Traditional Working Horse	Other	Total
Quarter Horse	693	1,366	19	1,444	3,522
Thoroughbred	2,506	1,519	12	2,385	6,422
Standardbred	54	52	0	214	320
All Other Breeds	5,741	4,274	63	7,017	17,095
Total	8,994	7,211	94	11,060	27,359



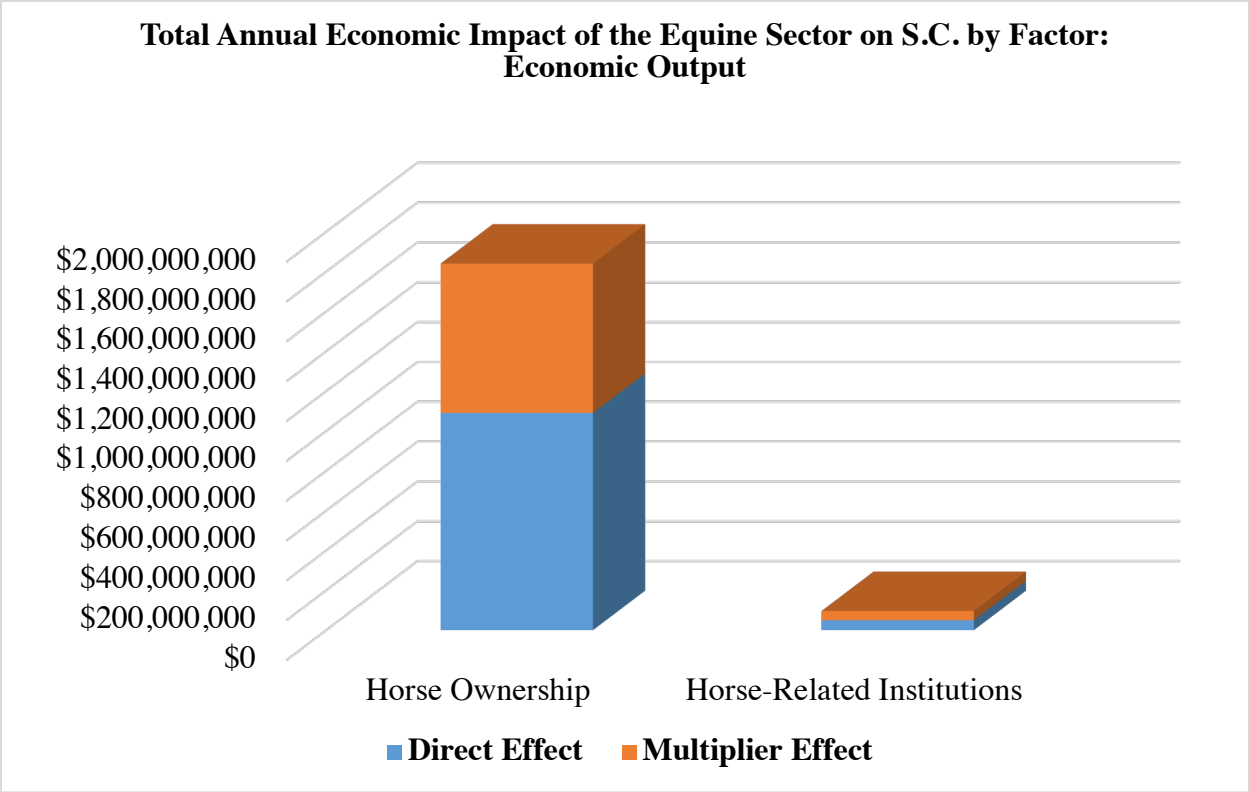
Approximately 95 percent of the total economic impact of the equine sector on South Carolina comes from spending by horse owners. This includes spending on all horse-related goods, services, and transportation. The remaining 5 percent results from business activities associated with horse-related institutions, such as horse racing, showing, and recreational organizations. This breakdown can be observed in Tables 9 and 10, which highlight the contributions of both horse owners and horse-related institutions.⁶

**Table 9 – Total Annual Economic Impact of the Equine Sector on S.C. by Factor:
Economic Output**

Note: In Millions of Dollars

	Horse Ownership	Horse-Related Institutions
Direct Effect	\$1,090,748,181	\$49,997,007
Multiplier Effect	\$749,497,794	\$46,027,049
Total Impact	\$1,840,245,975	\$96,024,056

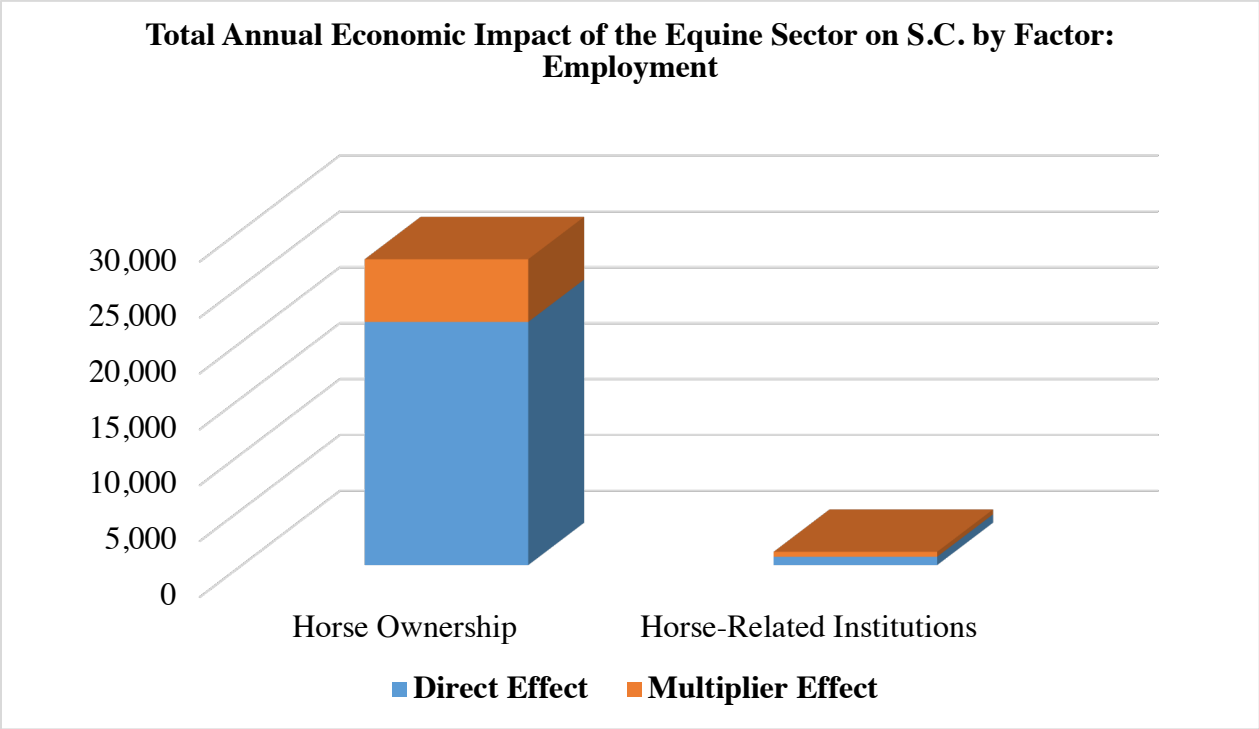
⁶ Economic activity driven by horse-related tourism is part of both categories and thus is included in the estimates provided.



**Table 10 – Total Annual Economic Impact of the Equine Sector on S.C. by Factor:
Employment**

	Horse Ownership	Horse-Related Institutions
Direct Effect	21,752	747
Multiplier Effect	5,607	439

Total Impact	27,359	1,186



Conclusion

The data from this study can be used to inform future policy and business decisions, but what we have confirmed in this study is that horses are a galloping industry in South Carolina in terms of economic impact. The 73,600 horses in the state contribute to a total annual economic impact of over \$1.9 billion, supporting 28,545 jobs. These numbers are significantly higher than in the last study of this nature conducted in 2004, and are in line with what might be expected given the relative concentration of horses in South Carolina compared to the United States.

Approximately 95 percent of this economic impact comes from spending by horse owners on all horse-related goods, services, and transportation. The remaining 5 percent results from business activities associated with horse-related institutions, such as horse racing, showing, and recreational organizations.

Finally, we have shown that the economic impact of the equine sector extends to many industrial sectors, the 10 most impacted areas being support activities for agriculture and forestry, real estate, wholesale trade, farm machinery and equipment manufacturing, limited-service restaurants, veterinary services, hotels and motels, promoters of performing arts and sports, general merchandise stores, and construction of nonresidential structures.

APPENDIX I



Economic Impact Survey of Equine Industry in South Carolina Horse Owners' Perspective

Thank you for your participation in this survey. The SmartState Center at the University of South Carolina is conducting this study to determine the total economic impact of the equine industry on South Carolina. We would appreciate approximately 10-15 minutes of your time to provide your input. Your contribution is very important to us, and **all responses are anonymous**.

If you have questions at any time about the survey or procedures, you may contact the primary researcher Dr. Simon Hudson at shudson@hrsm.sc.edu. If you have any questions about your rights as a participant, you may contact the Office of Research Compliance at the University of South Carolina on 803-777-7095. Thank you!

PART 1: SCREENING QUESTIONS

1. Do you currently own any horses?
1) Yes (please continue the survey) 2) No (exit the survey. Thank you!)
2. Do you spend money on these horses in South Carolina?
1) Yes (please continue the survey) 2) No (exit the survey. Thank you!)
3. Do you consider your horses a business?
1) Yes (please continue the survey) 2) No (exit the survey. Thank you!)

PART 2: GENERAL INFORMATION ABOUT YOUR HORSES

1. How many horses do you currently own?
1) 1-5 2) 6-10 3) 11-15 4) 16-20
5) 21-25 6) 26-30 7) above 30
2. What is the fair market value of all the quine you own or manage?
Please write the number here _____
3. In general, what is your primary purpose for owning horses? (*Check all that apply*)
1) Competition 2) Recreation/pleasure 3) Racing
4) Traditional working horse 5) Breeding
6) Showing 7) Driving
8) Trail riding 9) Therapy
10) Other (*Please specify*) _____

4. What is your ownership status?
1) Sole ownership 2) Shared ownership
5. What is the breed of your horses? (*Check all that apply*)
1) Quarter Horse 2) Thoroughbred 3) Standardbred
4) UPHA Breeds 5) Arabian or Arabian cross
6) Other (*Please specify*) _____
6. What status is the land used by your horses?
1) Land owned 2) Land leased
7. Are you involved with any South Carolina horse clubs or organizations?
1) Yes (*Please specify*) _____ 2) No
8. What is your primary discipline?
Please specify _____

PART 3: AGRICULTURAL IMPACTS

1. Do you board them or keep them at home?
1) Home (how many? Please write the number here) _____
2) Board (how many? Please write the number here) _____
2. How many acres do you own or lease for horses?
Please specify the number here _____
3. Have you at any time purchased land in SC primarily for horse use?
1) Yes 2) No
4. How many acres did you purchase?
Please specify the number here _____
5. What is the fair market value of your property today?
Please specify the number here _____
6. Did you move from out of state?
1) Yes 2) No
7. Was your move horse-related?
1) Yes 2) No

PART 4: ECONOMIC IMPACTS

Think about your experience of owning a horse. Please estimate the total amount of money you spend on the following categories annually in South Carolina. Please list the total amount of money in U.S. dollars and put \$0 if you do not spend anything.

Categories	U.S. dollars
Horse-Related Goods	
Barn cost	
Bedding	
Equipment, such as helmets, riding boots, chaps or riding breeches, spurs or crops, and gloves	
Farrier fees	
Feeding	
Grooming supplies, such as saddles, bridles, halters, brushed, shampoo, horse blanket and lead lines	
Hoof maintenance	
Horse farms	
Horse tack	
Maintaining your stables/barn/shelter	
Supplemental nutritional needs (forage, grain, etc.)	
Horse-Related Services	
Boarding in a pasture	
Veterinary	
Horse insurance	
Jockey fees	
Promoting horses in a breed magazine or show program	
Riding equipment	
Riding lessons	
Taking photos of horses	
Training	
Horse-Related Transportation	
Trailer	
Vehicle maintenance of a trailer	
Overhead & Capital Expenses	
Employee compensation	
Garbage removal	
License fees	
Marketing & advertising	
Office supplies	
Property taxes	
Security technology	
Telecommunications	
Utilities	
Website	
Taxes	
Federal tax	
Local tax	
State tax	

Other (Please specify)	

PART 4: DEMOGRAPHICS

1. What is the **zip code of your business?** _____
2. What is your **gender?** 1) Male 2) Female
3. **In which year were you born? (XXXX)**_____
4. **Are there any other comments that you would like to add about the economic impact of the equine industry on South Carolina? Please feel free to write about them.**

Thank you for completing the survey!



Economic Impact Survey of Equine Industry in South Carolina Industry Suppliers' Perspective

Thank you for your participation in this survey. The SmartState Center at the University of South Carolina is conducting this study to determine the total economic impact of the equine industry on South Carolina. We would appreciate approximately 5 minutes of your time to provide your input. Your contribution is very important to us, and **all responses are anonymous.**

If you have questions at any time about the survey or procedures, you may contact the primary researcher Dr. Simon Hudson at shudson@hrsm.sc.edu. If you have any questions about your rights as a participant, contact the Office of Research Compliance at the University of South Carolina on 803-777-7095. Thank you!

PART 1: SCREENING QUESTIONS

1. What is the category of your business? (Check all that apply)
 - 1) Horse-related goods (e.g. feed, tack, etc.)
 - 2) Horse-related services (e.g. boarding, training, etc.)
 - 3) Horse-related transportation (e.g. trailering)
 - 4) Other (*Please specify*) _____
 - 5) None of the above (exit the survey. Thank you!)

2. Does your business only supply the equine industry?
 - 1) Yes
 - 2) No. Please specify the percentage of your business tied directly to the equine industry?

PART 2: ECONOMIC IMPACT

1. Please indicate the number of your full time equivalent in the year of 2017. _____
2. Please indicate your total revenue in the year of 2017.
 - 1) \$0-\$50,000 2) \$50,001- \$100,000
 - 3) \$100,001- \$500,000 4) \$500,001-\$1,000,000
 - 5) Above \$1,000,000
3. Please indicate your total payroll in the year of 2017.
 - 1) \$0-\$50,000 2) \$50,001- \$100,000
 - 3) \$100,001- \$500,000 4) \$500,001-\$1,000,000
 - 5) Above \$1,000,000

PART 3: DEMOGRAPHICS

1. What is the **zip code of your business?** _____
2. How long has your organization been in business?
1) 5 years or less 2) 6-10 years 3) 11-15 years 4) 16-20 years 5) above 20 years
3. **Are there any other comments that you would like to add about the possible economic impact the equine industry on South Carolina? Please feel free to write about them.**

Thank you for completing the survey!



Economic Impact Survey of Equine Industry in South Carolina Organizers' Perspective

Thank you for your participation in this survey. The SmartState Center at the University of South Carolina is conducting this study to determine the total economic impact of the equine industry on South Carolina. We would appreciate approximately 5 minutes of your time to provide your input. Your contribution is very important to us, and **all responses are anonymous.**

If you have questions at any time about the survey or procedures, you may contact the primary researcher Dr. Simon Hudson at shudson@hrsm.sc.edu. If you have any questions about your rights as a participant, contact the Office of Research Compliance at the University of South Carolina on 803-777-7095. Thank you!

PART 1: SCREENING QUESTIONS

1. What is the category of your organization? (*Check all that apply*)
 - 1) Horse racing
 - 2) Horse showing
 - 3) Horse competition
 - 4) Horse recreation
 - 5) Other (*Please specify*) _____
 - 5) None of the above (exit the survey. Thank you!)

PART 2: ECONOMIC IMPACT

1. Please indicate the number of your employees in the year of 2017. _____
2. Please indicate your total revenue in the year of 2017.
 - 1) \$0-\$50,000
 - 2) \$50,001- \$100,000
 - 3) \$100,001- \$500,000
 - 4) \$500,001-\$1,000,000
 - 5) Above \$1,000,000
3. Please indicate your total payroll in the year of 2017.
 - 1) \$0-\$50,000
 - 2) \$50,001- \$100,000
 - 3) \$100,001- \$500,000
 - 4) \$500,001-\$1,000,000
 - 5) Above \$1,000,000

PART 3: DEMOGRAPHICS

1. What is the **zip code of your business?** _____

2. How long has your organization been in business?

1) Less than 5 years 2) 6-10 years 3) 11-15 years 4) 16-20 years 5) above 20 years

3. Are there any other comments that you would like to add about the possible economic impact the equine industry on South Carolina? Please feel free to write about them.

Thank you for completing the survey!