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Thomas E. Lambert

University of Louisville, thomas.lambert@louisville.edu

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Lambert, Thomas E., "Horse Racing and Historical Horse Racing's Impact on the Kentucky Economy: Possible HHR Saturation?" (2024). *Faculty Scholarship*. 941.

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Horse Racing and Historical Horse Racing's Impact on the Kentucky Economy: Possible HHR Saturation?

Thomas E. Lambert, PhD
Applied Economist
College of Business, University of Louisville
Louisville, KY 40292
502-403-9795
Thomas.Lambert@Louisville.Edu

The Commonwealth of Kentucky currently has 5 thoroughbred racing tracks and 3 harness racing tracks (Kentucky Horse Racing Commission 2023 and Mint Julep Louisville 2021). As Table 1 below shows¹, the industry employees roughly 7,000 people (direct jobs), and these jobs annually support another 2,000 jobs or so throughout the state. These 2,000 jobs are jobs that are provided by the suppliers to the horse race tracks (indirect jobs) and jobs that are created by the spending of the race track employees and the employees of suppliers on food, housing, transportation, and clothing by vendors and retailers throughout the state (induced jobs). The multiplier shows that for every 100 jobs that exist in the horse racing industry, another 29 jobs are supported in other industries. The direct jobs generate in 2023 dollars around \$254 million in payroll (direct payroll), and these in turn support another \$111.5 million in payroll among race track suppliers and other businesses in the state such as retailers, homebuilders, etc. (indirect and induced effects). Every \$100 in horse racing payroll supports another \$44 in payroll in related industries according to the multiplier shown. With regard to state domestic product or output/revenues, the tracks create around \$769 billion in direct revenues/output while their suppliers and supported businesses contribute approximately another \$361 million in domestic product (indirect and induced effects). For every \$100 generated by horse racing, another \$47 dollars is supported in the Kentucky economy on average. As of 2022, Kentucky

¹ Results have been estimated by the IMPLAN (2023) modeling system.

state gross domestic product (GDP) is estimated to be \$259 billion (US Bureau of Economic Analysis 2023).

Table 1

Impact	Employment	Payroll/Labor Income	Revenues/Output
1 - Direct	7,017	\$ 254,423,588.26	\$ 768,967,849.86
2 - Indirect	748	\$ 42,296,185.16	\$ 137,654,369.06
3 - Induced	1,279	\$ 69,312,782.07	\$ 223,345,300.29
Totals	9,043	\$ 366,032,555.49	\$ 1,129,967,519.21
Multipliers	1.29	1.44	1.47

Table 2 below illustrates the fiscal and governmental impacts of the 8 tracks. The tracks alone generate an approximate and estimated \$2.5 million in local (cities, county governments, school districts, etc.) income, property, sales and excise taxes; around \$8.8 million in such taxes for the state; and around \$52.8 million in taxes for the federal government. When considering taxes collected from their suppliers and from businesses supported by their employees and the employees of suppliers, around another \$5.7 million in tax revenues are created (indirect and induced effects; around another \$12.7 million in state taxes (indirect and induced effects); and around \$25 million in tax revenues for the federal government (indirect and induced effects). Looking at the multipliers, each dollar the tracks pay in taxes is almost completely matched by other supported businesses at the local, county, and state government levels. Each dollar of federal taxes creates an extra 47 cents in federal taxes paid by supported businesses. Total taxes collected at the local, county, state, and federal levels for the direct, indirect, and induced levels amount to over \$107 million.

Table 2

Impact	Local	State	Federal	Total
1 - Direct	\$ 2,549,679.29	\$ 8,803,742.78	\$ 52,835,863.19	\$ 64,189,285.28
2 - Indirect	\$ 1,426,054.40	\$ 3,324,377.33	\$ 9,019,927.79	\$ 13,770,359.51
3 - Induced	\$ 4,321,762.75	\$ 9,409,497.23	\$ 15,763,370.73	\$ 29,494,630.72
Totals	\$ 8,297,496.46	\$ 21,537,617.34	\$ 77,619,161.72	\$ 107,454,275.52
Multipliers	3.25	2.45	1.47	1.67

Historical Horse Racing

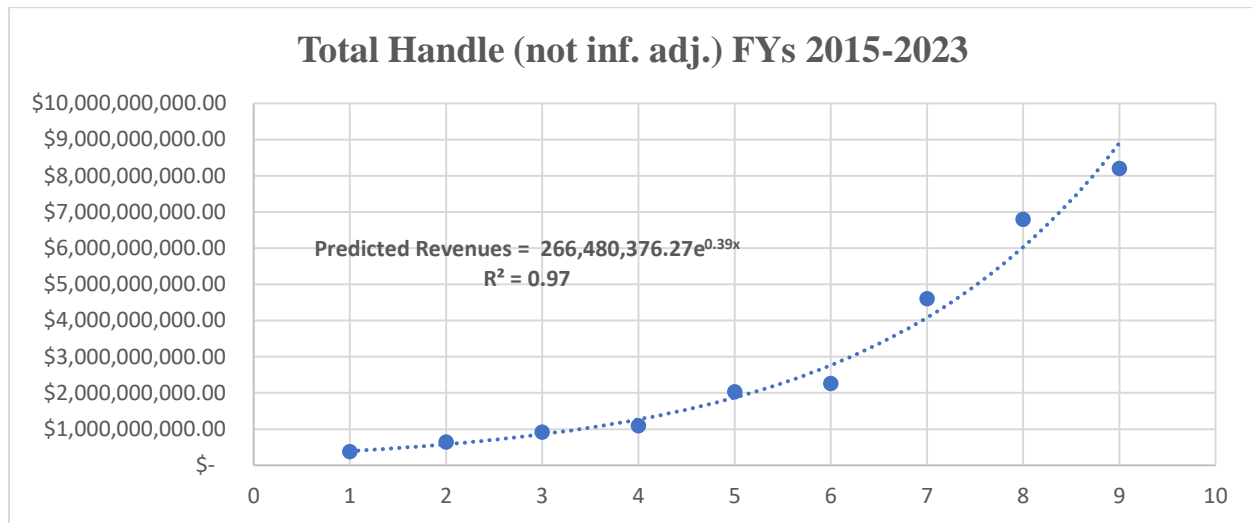
Historical Horse Racing (HHR) machines have made a strong contribution to the horse racing industry in several states over the last 5 years or so thanks to the fact that HHR revenues have been used by various race tracks to supplement purses for races. In Kentucky, HHR machines have been classified by the legislature as a form of pari-mutuel wagering after a court ruling questioned their legitimacy from a state constitutional perspective. The re-classification allows HHR machines to continue to operate, and with that race tracks and gaming centers across the state plan to expand the number of machines.

Using Kentucky Horse Racing Commission reports of yearly, fiscal year (July 1 to June 30) revenues from 2015 to 2023, Figure 1 below shows the trend in the contributions in gross revenues or handle per year (NOT inflation adjusted) for the average number of all HHR machines as of a particular year in the Commonwealth. The upward sloping trend line explains shows exponential growth and explains about 97% of the variation in gross revenues per year. Each HHR machine contributes at least \$100,000 per month to total gross revenues on average. Usually payouts to customers are at least 90% of gross revenues. Therefore, 1,000 machines (the state currently has around 7,000) should yield at least \$100 million per month or around \$1.2 billion per year on average, around \$8.4 billion on 7,000 machines on average. At a tax rate of 1.5%, this produces around \$15 million in tax revenues for each \$1 billion earned for the Commonwealth per year on average and holding all else constant.² With low labor and

² These numbers are adjusted for and account for reduced operating hours in 2020 due to Covid-19 restrictions and precautions. Usually payouts to customers are at least 90% of gross revenues. These are slightly higher payout rates than casinos which are located in neighboring states. Research by the author and others have shown

maintenance costs that accompany HHR machines, it is easy to see why race tracks and gaming centers in the state want to add more of these machines.

Figure 1



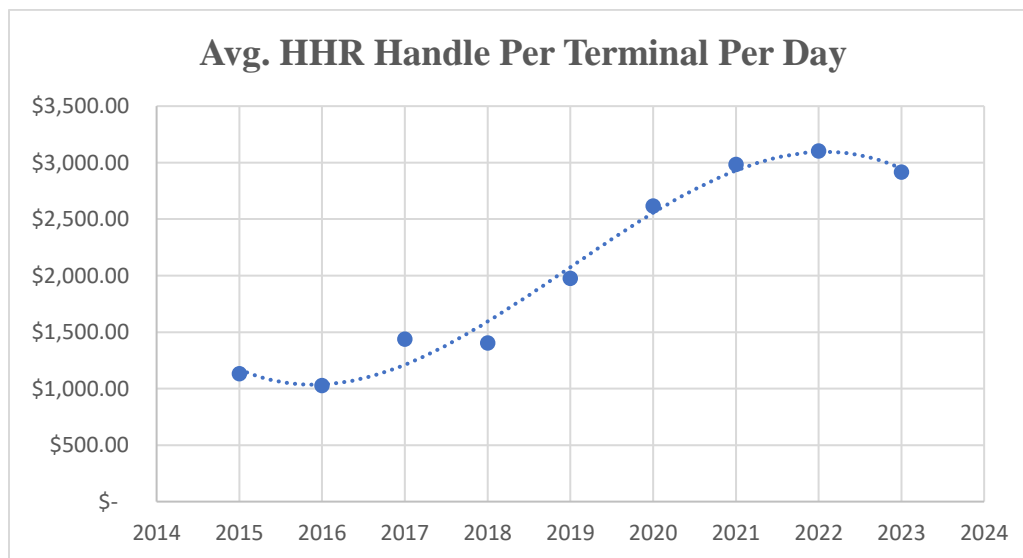
Thanks to the growth of HHR and because it is classified as pari-mutuel wagering, Kentucky racetracks are now able to offer more dollars as part of their contractual purse arrangements on live racing in which 15% of net takeout or profit on gross handle per race is paid to race participants. One billion dollars in HHR wagering can be used to fund live/regular racing purses by approximately \$1 billion * 10% * 1.5% = \$1,500,000. By boosting regular racing purses through these supplements, Kentucky tracks now boast that they can attract more and better racehorses than what would be the case otherwise. Purse size matters when it comes to the number and quality of horses participating in races.

There is a cautionary note to be sounded on HHR, however. Although in the aggregate HHR revenues continue to grow year in and year out, on an average number of machines per year basis, a plateau may have been reached in 2022 on HHR revenues. Kentucky Horse Racing Commission reports show that in March 2022, revenues per machine reached a peak of \$8,602 and since then have not

that the higher the payout rate of a casino/gaming center, it usually has higher demand and higher total revenues than those of surrounding establishments that have lower payout rates.

recovered to this height as the number of machines in the state has grown. This could be because of the saturation of terminals/machines in the state and/or because of the high inflation rates experience in the nation that year and in 2023. Such high inflation (around 8% in 2022 alone) dampers disposable personal income (DPI), and gaming levels depend heavily on sufficient DPI. At the same time, the author and other researchers have found that almost all forms of gambling reach a saturation or peak stage after time goes by, so therefore any plateauing of HHR revenues aside from inflation problems is plausible. Any proposals to increase HHR taxes would/could cause further declines in per machine per day wagering since the demand for gaming is elastic and higher taxes usually imply lower payout rates to patrons. Please see Figure 2 below which plots estimated, average machine/terminal earnings *per day* for each year since 2015.

Figure 2



HHR also provides employment and other forms of taxes than those already mentioned. Table 3 indicates that the state's gaming centers employ approximately 1500 people (direct effects/employment) on average during a year, and these jobs boost state employment by another 19,000 or so thanks to around 15,000 jobs that are with gaming center suppliers and vendors

(indirect effects), and approximately 4,100 other jobs supported in retailing, construction, and services (inducted effects) that exist because of spending by gaming center employees and the employees of those which do business with the centers. The impacts for labor income or payroll created or supported throughout the Commonwealth by HHR establishments are also profound as \$70 million in direct payroll in the industry help to generate another \$1.1 billion in labor income among suppliers and other establishments. The multipliers for both employment and payroll effects are very large. Finally, the \$8.2 billion in sales or output for HHR results in another approximate \$3.3 billion in business sales throughout the state (indirect and induced effects).

Table 3

Impact	Employment	Payroll/Labor Income	Revenues/Output
1 - Direct	1,500	\$ 70,086,477.40	\$ 8,200,696,666.00
2 - Indirect	15,000	\$ 882,222,060.78	\$ 2,597,141,344.59
3 - Induced	4,100	\$ 221,887,199.64	\$ 714,933,147.50
Totals	20,600	\$ 1,174,195,737.82	\$ 11,512,771,158.08
Multipliers	13.73	16.75	1.40

Table 4 demonstrates the tax revenue capacity of HHR as of 2023. At the local level (school boards, city, county governments, etc.) HHR gaming center taxes yield around \$321 million in local property, occupational, and other taxes. HHR suppliers and businesses supported by employees who work in its supply chain contribute around another \$45 million in local taxes (indirect and induced effects). At the state level, HHR helps to make a contribution at all levels (direct, indirect, and induced effects) of around \$762 million when it comes to income (business and personal), sales, excise, and other taxes. The federal tax effects combined are also estimated to be quite large at \$1.6 billion per year and include business and personal federal income taxes, excise taxes, Social Security, Medicare and other federal taxes.

Table 4

Impact	Local	State	Federal	Total
1 - Direct	\$ 320,630,356.58	\$ 657,829,192.85	\$ 240,472,104.25	\$ 1,218,931,653.68
2 - Indirect	\$ 32,278,019.63	\$ 74,469,121.03	\$ 188,659,722.33	\$ 295,406,862.98
3 - Induced	\$ 13,832,674.21	\$ 30,116,464.11	\$ 50,456,152.09	\$ 94,405,290.41
Totals	\$ 366,741,050.41	\$ 762,414,777.98	\$ 479,587,978.68	\$ 1,608,743,807.07
Multipliers	1.14	1.16	1.99	1.32

References:

Mint Julep Louisville. 2021. *The History of Horse Racing in Kentucky*. July 30, 2021.
<https://mintjuleptours.com/2021/07/30/the-history-of-horse-racing-in-kentucky/> . Accessed on June 9, 2022.

Kentucky Horse Racing Commission. 2016 to 2023. Historical Horse Racing Summary. Frankfort, Kentucky.

U.S. Bureau of Economic Analysis. 2023. "[SAGDP1 State annual gross domestic product \(GDP\) summary](#)" (accessed Tuesday, December 5, 2023).