

The Economic Impacts of Horse Racing and Breeding in Ontario, 2010

Submitted to

Ontario Horse Racing Industry Association

By

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Executive Summary

The Ontario Horse Racing Industry Association (OHRIA) retained Econometric Research Limited (ERL) to undertake a comprehensive review of the economic impact of horse racing and breeding in Ontario in 2010. Econometric Research Limited designed and implemented two surveys and obtained data from many sources in the industry in Ontario and elsewhere. This data formed the basis upon which this report has been produced.

Horse racing and breeding are basically rural activities which assume a critical function in shoring both the rural economy of Ontario and in diversifying its income sources. The impact results indicate a relatively high level of efficiency in the creation of jobs per dollar of expenditure and very large returns to all levels of government. All the multipliers reported here are relatively high and compare rather favourably with other tourism or even industrial multipliers.

A number of findings of the study are summarised below:

- The horse racing and breeding industry is an agricultural based industry that also augments and diversifies the tourism, entertainment and export economic base of Ontario.
- The horse racing and breeding industry in Ontario is credited with \$2 billion of recurrent expenditures in 2010 dollars.
- Today the Ontario horse racing industry is hi-tech, a vibrant partner in the entertainment business and is a key node in the New Economy. It combines slot machines with live racing, receives and transmits racing signals to/from the rest of the world, and wagers are accepted over the telephone, internet and mobile devices and are made into many teletheatres managed by the industry at several locations outside the tracks.
- Over 31,441 Ontarians owed their permanent jobs to the horse racing and breeding industry in the province in 2010. In fact, many more Ontarians work in the industry on a part-time basis. A total of about 60,000 people are employed in this industry when both part-time and casual labour are included.
- All three levels of government realise substantial revenues on the horse racing and breeding industry expenditures (\$782 million compared to \$576 million in the year 2000). The Federal government realised \$382.7 million, whereas the Provincial government realised \$261.6 million (exclusive of the slot machine profits at the tracks). The remaining \$138 million goes to local governments in the province. This total is inclusive of the slot machine revenues paid to host municipalities where the tracks are located.

- A total of \$1.5 billion in wages and salaries in Ontario are sustained annually by the total expenditures of the provincial horse racing and breeding industry. This total was 50% larger than the \$1 billion in the year 2000.
- Horse racing provides jobs from minimum wage to high-end technical and management positions. However, the effective average direct wage in the racing phase (backstretches and farms) is \$55,035 and \$47,145 (racetrack operations). The effective direct wage of slot operations exceeds \$50,163 annually. These wages are not much different from some of the highest industrial wages in Ontario.
- The employment impacts of the horse racing and breeding industry in Ontario are diffuse and cover almost the full spectrum of activities. Many of the jobs reflect the strong linkages of horse racing with agriculture, the agricultural manufacturing sector, the agricultural services sector, and the rural economy.
- The economic contributions of the horse racing and breeding industry to the rural economy compare favourably and exceed the individual contributions of wheat, eggs, poultry and hogs in 2010. It is our estimate that the horse racing and breeding industry is among the top four subsectors contributing activities to the rural economy (along with dairy products; fruits and vegetables; soybeans and corn).
- The links of this industry to the rural economy are substantive and complex. A significant horse breeding industry is needed to produce the horses for the racing phase. Thousands of acres of agricultural land and many workers are needed to care, train and groom the animals and maintain the farms where they reside. The gestation period of horses is over 11 months and horses do not start to race until they reach the age of two or three. This means that about three to four years of time and resources are spent on producing and training each horse before it ever reaches the track.
- Activities such as the breeding, raising and training of horses are perfectly suited to greenbelt area and the sub prime agricultural land considered productive for more intense forms of agriculture
- Most of the veterinarians, blacksmiths, farriers, hay and grain suppliers, transportation workers, harness and saddle makers and many others who provide services and products needed to breed, maintain and train the horses are located in the rural parts of the province.
- Many racehorses ultimately fill the ranks of pleasure horses, jumpers, and dressage animals, thus continuing the need for labour, feed and supplies.

Introduction

The enjoyment and appreciation of raising or racing a horse cannot be assigned a dollar value. There is no amount of money that will reflect accurately this utility. If this were not the case, it would be very difficult to explain or rationalise the large sums of money which owners spend on breeding and racing horses that often do not net back even a fraction of these costs to their owners. But the enjoyment of the sport and the participation in racing or raising horses involve the use of scarce resources that create secondary economic consequences far beyond the primary benefits to the owners and horse racing enthusiasts.

The horse racing and breeding industry in Ontario continues to be an agricultural based activity that has also increasingly become an integral part of the New Digital Economy based on Information and Computer Technologies. Gone are the days when the industry was restricted to a narrow market or to a particular physical venue. The horse racing industry in Ontario is now a high-tech, export oriented industry that reaches far beyond any single location, generating new wealth for many rural communities, several other regions in Ontario and the Nation. A large network of teletheatres receive racing signals from across Canada and the entire world allowing bettors to access races far removed from the physical locations of these teletheatres. Today it is possible to wager over the phone and using the Internet.

The aggregate picture of the Ontario horse racing industry before slot machines were introduced at racetracks was not encouraging. The industry was stagnant in nominal terms and declining in real terms with some basic inherent instability. The purses were not rising sufficiently to induce the type of transformation that would have been necessary to enable the industry to compete effectively for the Ontario gaming or entertainment dollar.

Horse racing in Ontario declined in the early 1990s as purses and wagering declined in real terms. Several horse racing variables such as the field size, number of live races, unique horses and the number of starters all declined and/or experienced major swings between 1992 and 2000. The expansion of lotteries and the introduction of casinos, foreign signals, and foreign purchases of Ontario horses appear to have combined to undermine the vitality, growth and survivability of the industry. Several tracks closed as the industry rationalized its operations.

The introduction of slots at race tracks reversed the picture. Purses increased and so did wagering. Most of the horse racing indicators improved and a new era began to take root in the industry. The issue remains as to whether these changes will be sustainable, the extent to which they support the core business of the industry and compensate the horse racing industry for the cannibalization it suffered from the introduction of casinos in Ontario. It is also difficult to disentangle the impact of the slots from the many technological changes and expansions that were made, both at the tracks and outside, during the same time frame. Slots, to be sure, have invigorated the industry, allowed it to use new technology, globalized the industry and have reversed past declining trends.

We begin with a general discussion of the methodology of economic impact analysis, followed by a brief description of our impact system. We then proceed with a detailed analysis of the impact results and end up with a conclusion that presents a summary of the results.

Economic Impact Analysis and Methodology

A dollar spent on horse racing or breeding circulates and re-circulates within the economy, multiplying the effects of the original expenditures on overall economic activity. This process is referred to as the economic *multiplier effect*. It operates at several levels:

- The initial expenditures of the track on wages and materials are generally referred to as the direct costs of operation and their effects are referred to as the *initial (direct) effects*.
- Subsequent purchases by suppliers of materials and services to sustain the original and derivative expenditures are called the *indirect effects*.
- The *induced effects* emerge when workers in the sectors stimulated by initial and indirect expenditures spend their additional incomes on consumer goods and services.

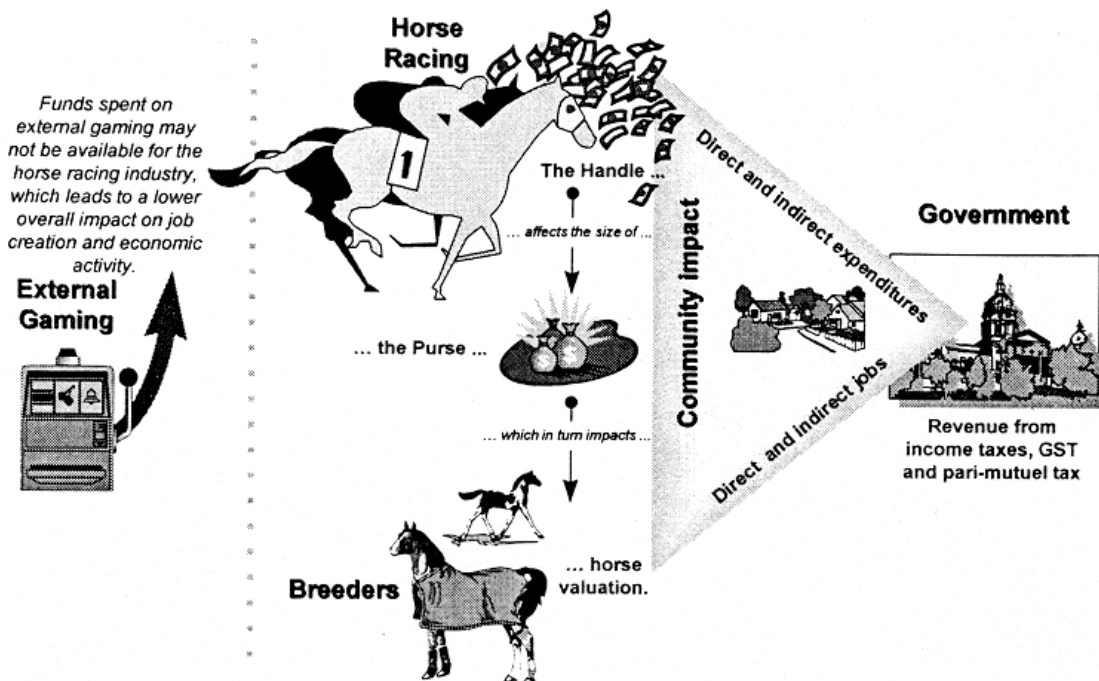
Wagering has traditionally driven this industry. Before the introduction of slots at race tracks, the total wager pool determined the size of the purse and the race horse and race track owners' incomes. Slot revenues augmented the purses. The higher purses raised the incomes of the race horse owner and created higher prices for younger horses. Theoretically, the increase in the income of the breeder would increase the value of the breeding stock, and the increase in the value of the breeding stock would ultimately increase the wager and sustain this virtuous cycle. The full benefits of the increased incomes for owners of horses are not realized because these owners still have to contend with a tax regime that is not conducive to the growth of the industry.

It is a fact that for every horse at the racetrack there are more than three horses at the farm (Wright 1996). It is also well known that the purses often cover only a fraction of the total cost of breeding and racing horses incurred by owners. Thus purses provide a low estimate of the actual connection a racetrack has with the rural/agricultural sector. All sectors of the economy benefit from the spin-offs created by the expenditures of the breeders and those associated with the racing activity (see Figure 1). These are not restricted to the original expenditures, they are multiplied as indirect and induced effects are taken into account.

Figure 1 below also depicts the nature and extent of the economic impact of the competition that horse racing is now facing from other gaming activities, and the likely impacts that this may have on the economy at large. Horse racing lost its monopoly on legalised gambling in 1970s and has had to compete with other forms of gambling for the

gaming dollar. This has happened at a time when the industry had to also compete for the Ontario sport dollar with a large menu of organised sport events and other entertainment activities that did not exist before. The average age of the bettor at horse racing events increased and the industry proved unable to attract younger customers, especially females. The impact results are structured to reveal the impact of introducing slot machine revenues that are used in part to increase purses and rejuvenate the industry.

Figure 1 – The Impact of Horse Racing on the Economy



Source: Ernst & Young, Financial Feasibility Analysis of the Impact of Slot Machines

Some of the key terms and definitions are presented below to assist the reader in interpreting the results of the economic impact analysis:

Initial expenditures – This figure indicates the amount of expenditures directly made by the operators of the track, the Associations in the industry, and by breeders and racehorse owners. It is these expenditures that typically drive the impact results.

Value Added (Gross Provincial Income) – This figure represents net output generated by the initial expenditures in the province. It is typically the sum of wages, rent, interest and profits in addition to indirect business taxes and depreciation minus subsidies.

Employment – This refers to the total person years (full-time equivalent jobs) generated by the horse racing and breeding industry including tracks, the Associations, farms, breeders, horse owners and agri-business servicing the industry.

Taxes – Our impact system generates a large number of taxes (personal income taxes, corporate profit taxes, GST, PST, local property and business taxes, etc..) each of which is linked with the level of government receiving it. For example, the Federal government

receives the proceeds from the GST tax, the Provincial government receives the provincial sales taxes, and the Local government receives the property and business tax.

Imports – These represent the goods and services acquired from outside the province to sustain the activities of the horse racing and breeding industry. They essentially represent leakages (seeping away) from the province.

Multipliers – These are summary measures that represent the division of the total impacts (direct, indirect and induced) by the initial expenditures. For example, the income multiplier associated with horse racing is calculated by dividing the total income (value added) impact by the initial expenditures on horse racing. The only exception is that of the employment multiplier where total employment is divided by direct employment in order to preserve the common units.

Economic impact analysis is a useful mathematical tool capable of quantifying the patterns and magnitudes of interdependence among sectors and activities. It is predicated on two fundamental propositions.

- First, regardless of the inherent value of primary activities such as horse racing or entertainment, to the extent that they involve the use of scarce resources they generate economic consequences that can be measured and compared.
- Second, economic impacts are only partially captured by assessing direct expenditures. Inasmuch as the economy is a complex whole of interdependent and interacting activities, there are some significant indirect and induced impacts associated with direct expenditures. These indirect and induced impacts are often larger than the direct impacts.

The Economic Impact Model

The impact model used here is a special application of a generic regional impact model (RIM: Ontario) developed by Econometric Research Limited. It is a specialized model that captures the economic impact of expenditures at the local level (municipalities, counties or economic regions), the provincial level (Ontario) and the national level. The model is based on a novel technology that integrates input-output analysis and location theory. The system has already been applied to the study of The Economic Impact of Tourism in Niagara Falls, The Economic Impact of Casino Windsor, The Economic Impact of Horse Racing and Breeding in Ontario, 1994, and several proposed casinos, industrial and tourism projects in Ontario, Alberta, Quebec and British Columbia.

The model utilises a large set of economic and technical databases for Ontario that are regularly published by Statistics Canada. A short list includes the inter-provincial input output tables, employment by sector, taxes by type of tax and the level of government collecting it, prices of products, energy used in physical and energy units, etc.

The model was used to calculate the impact of a number of activities associated with the horse breeding and racing industry in Ontario. These activities include track operational expenditures, farmers and horse owners' expenditures on breeding and racing. Since several of the separate activities (e.g., track, horsemen, owners, etc.) involved some overlap with other activities, care was exercised to avoid duplication. Total gross output by industry is calculated first and then used to calculate value added, labour income, taxes and employment using the industry and commodity specific parameters.

Cost of Production of Horses in the Racing and Breeding Phases

Although it is hard to estimate the precise number of Ontario's total racehorse population by type and stage of development, we were able to obtain data on standardbred horses from Ms. Cookson of Standardbred Canada and data on thoroughbred horses from the Jockey Club 2011 Ontario Facts. Using this data we have estimated this total to be 29,318 horses in 2010. This represents almost a 4% increase over the 28,233 horses in the year 2000. However, an increase in race dates has continued to create a horse shortage to fill races.

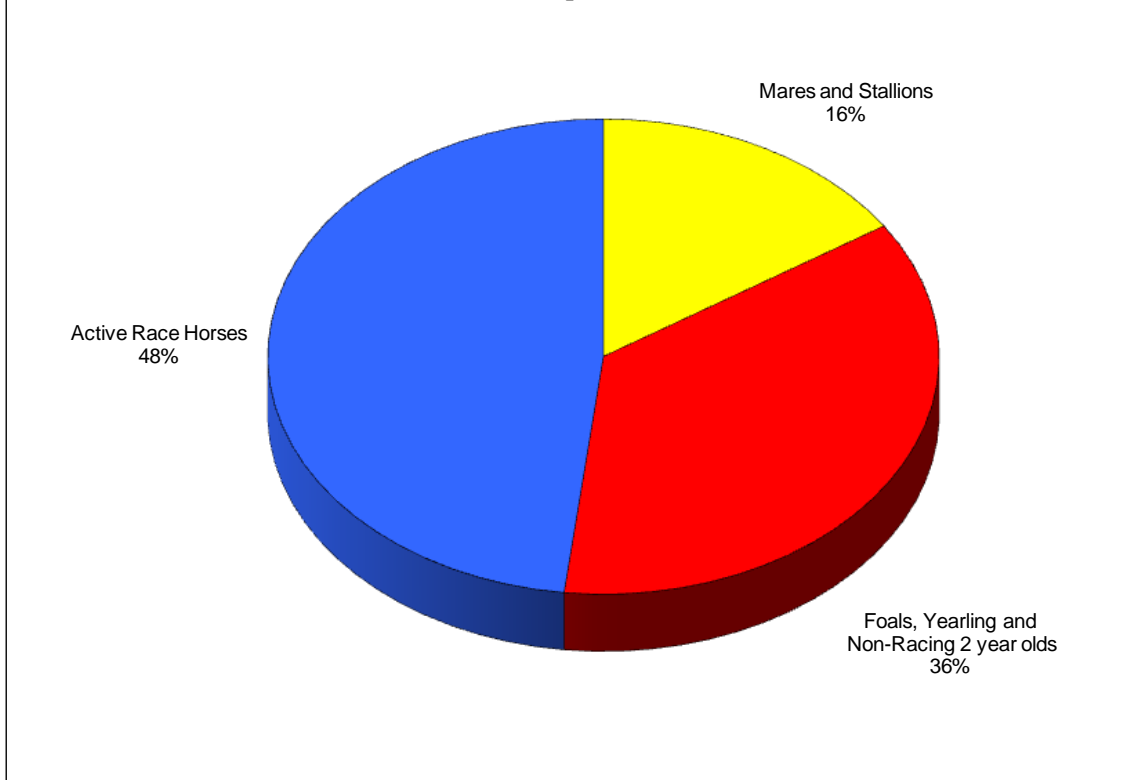
There are more standardbred than thoroughbred horses in Ontario. The ratio in 2010 is more than 1.6 to 1. More than 48.1% of this total is in the active racing stage, 15.7% are mares and stallions, and 36.1% are foals, yearlings and non-racing 2 years old (see Table 1 and Figure 2.) The total number of horses and the distribution between active and farm horses and between thoroughbred and standardbred is crucial for the determination of total annual cost of production and feeding.

Table 1
2010 Ontario Race Horse Population

	Thoroughbred	Standardbred	Quarter Horse	TOTAL
Mares and Stallions	1,572	2,588	455	4,615
Foals, Yearling & Non-Racing 2 Year Olds	5,057	4,688	847	10,592
Active Race Horses	3,777	9,634	700	14,111
Totals	10,406	16,910	2,002	29,318

Source: Janet Cookson of Standardbred Canada, the Jockey Club 2011 Ontario Fact Book and Bob Broadstock of Quarterhorse Owners (QROO)

Figure 2
2010 Race Horse Population Breakdown



Average daily feed cost (feed, bedding and vitamins) was calculated based on \$15.22 per day for thoroughbred racehorses and \$14.91 per day for standardbred horses. The cost of production includes the cost of keeping horses per day at the racetrack and/or on the farm. These costs comprise all variable and fixed costs such as labour, insurance, trucking, depreciation, etc. The details of these costs are in tables 2, 3, 4, 5, 5a, 5b, and 5c. Figures 3, 4, 5, and 6 display graphically the same results. The costs vary by the age of the horse, stage of development, type and quality.

There are significant differences in the cost of production of thoroughbred and standardbred horses. The average cost of production of a thoroughbred horse is over \$191.61 per day or \$63,045 per year (Table 4 and Figure 5 present the full distribution of this cost). Alternatively, the average variable cost of production of a standardbred horse per day is \$174.76 or \$58,619 per year, which is slightly less than the corresponding cost of a thoroughbred (Table 3 and Figure 4). Breeding costs are lower than the corresponding production costs during the racing phase for both standardbred and thoroughbred horses, which fact brings the average total cost of a horse in Ontario to \$36,584 per year in 2010 (Table 2) which is 20% higher than the \$30,593 cost of production in the year 2000.

Table 2

Total Feed Cost and Production Costs, 2010

	Horse Numbers	Annual Feed Cost*	Annual Cost of Production**	Production Cost Per Horse
Active Race Horses	14,111	\$76,794,179	\$802,854,995	\$56,896
Other Farm Horses	15,207	\$24,976,870	\$269,694,694	\$17,735
Totals	29,318	\$101,771,049	\$1,072,549,688	\$36,584

Source: Econometric Research Limited

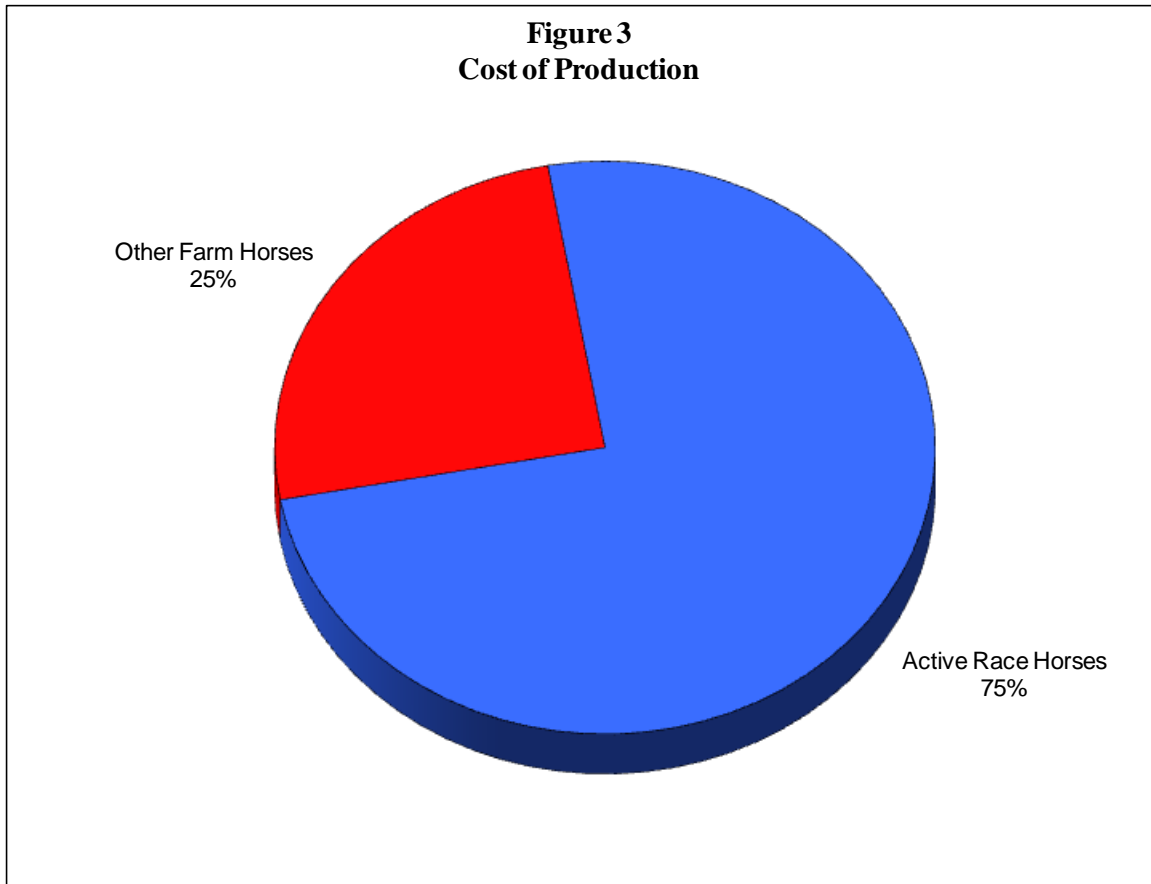
Notes:

*: Average daily feed cost - the cost of feed, bedding and vitamins .

Feed costs were calculated using \$14.91/Day for Standardbred, \$15.22 for thoroughbred and \$4.50/Day for Farm Horses

** : Cost of production = the cost of keeping horses per day at the race track and/or the farm. It includes all variable and fixed costs eg. feed, labour, insurance, trucking, buildings and depreciation on buildings, equipment and horses. It was calculated using \$126.55/Day for Standardbred Racehorses, and \$138.54/Day for Thoroughbred Racehorses, and \$48.59/Day for Farm Horses

**Figure 3
Cost of Production**



Training costs are the largest single cost item during the racing phase with over \$177 million of expenditures on standardbred horses and a corresponding \$113 million on thoroughbred horses (tables 3 & 4). Veterinary, feed and depreciation are also large cost items during this phase.

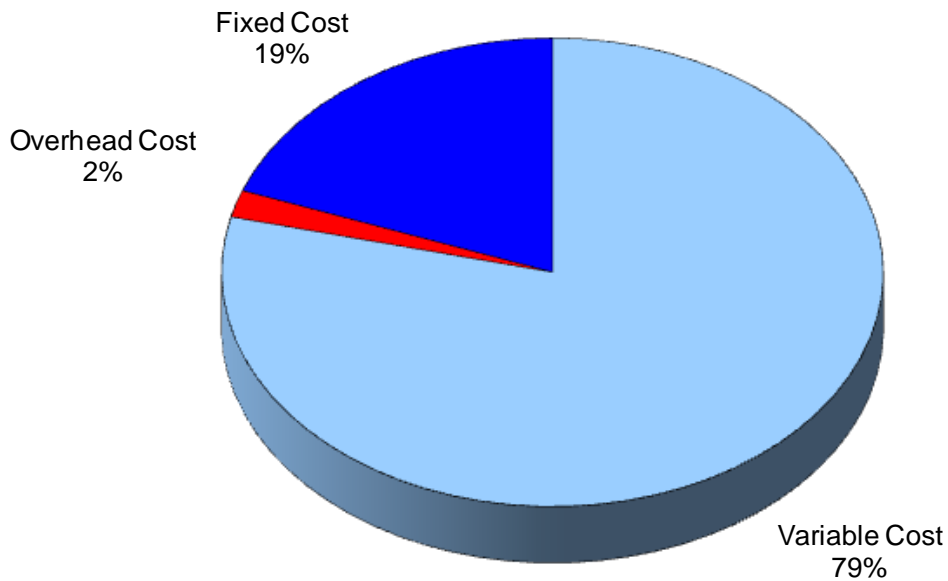
The annual cost of production increased substantially between 2000 and 2010, mainly due to increases in the per-horse cost of production rather than due to increases in the number of horses.

Table 3
Cost of Production - Standardbred Race Horses

Item	Cost Per Horse Per Day	Percentage	Annual Cost	Annual Cost Per Horse
Feed	\$8.18	5.09%	\$28,764,234	\$2,986
Vitamins	\$2.32	1.44%	\$8,158,071	\$847
Bedding	\$4.41	2.75%	\$15,507,368	\$1,610
Vet	\$15.52	9.66%	\$54,574,683	\$5,665
Training	\$50.36	31.36%	\$177,086,408	\$18,381
Groom	\$3.31	2.06%	\$11,639,317	\$1,208
Equipment	\$3.78	2.35%	\$13,292,030	\$1,380
Transportation	\$12.59	7.84%	\$44,271,602	\$4,595
Shoeing	\$4.77	2.97%	\$16,773,276	\$1,741
Boarding	\$18.88	2.94%	\$16,597,455	\$1,723
Race Fees	\$6.89	4.29%	\$24,228,065	\$2,515
Legal	\$1.03	0.64%	\$3,621,902	\$376
Travel	\$1.38	0.86%	\$4,852,646	\$504
Misc.	\$1.72	1.07%	\$6,048,225	\$628
Interest	\$0.26	0.16%	\$914,267	\$95
Horse Insurance	\$2.59	1.61%	\$9,107,502	\$945
Communication	\$0.41	0.26%	\$1,441,728	\$150
Depreciation	\$17.25	10.74%	\$60,658,073	\$6,296
Investment	\$13.80	8.59%	\$48,526,458	\$5,037
Linaments	\$2.31	1.44%	\$8,122,907	\$843
Jogger Rental	\$2.31	1.44%	\$8,122,907	\$843
Licenses	\$0.69	0.43%	\$2,426,323	\$252
Total	\$174.76	100.00%	\$564,735,447	\$58,619

Source: Econometric Research Limited

Figure 4
Distribution of Cost of Production
Standardbred Race Horses



The cost of production during the breeding phase varies with the age of the horse and its stage of development. The details of these expenditures differentiated by type of horse are presented in tables 5a, 5b and 5c and Figure 6.

Horse owners in Ontario spent a total of about \$270 million per year during the breeding phase in the year 2010. Wages are the largest costs during this phase with over \$60 million. Stud fees, depreciation, insurance and sales' commissions are also large expenditure items during the breeding phase (Table 5 and Figure 6).

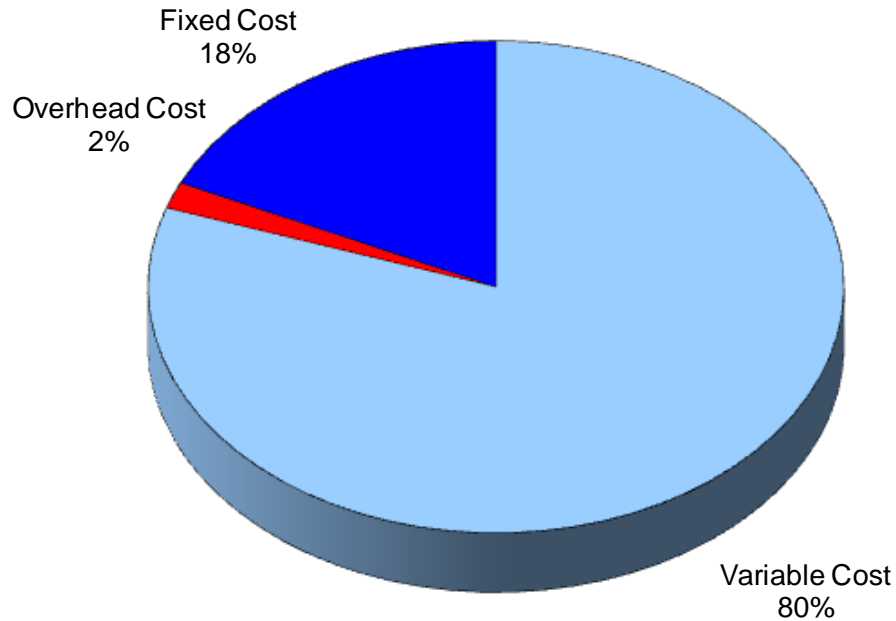
In the year 2000 wages were also the largest cost item but stood only at \$50.5 million or about 85% of what they were in 2010. Stud fees increased substantially between 2000 and 2010 from \$13.8 million to over \$20 million or by about 45%. Insurance costs over the same period increased by almost 30% from \$12.5 million to nearly \$16 million.

Table 4**Cost of Production - Thoroughbred Race Horses**

Item	Cost Per Horse Per Day	Percentage	Annual Cost	Annual Cost Per Horse
Feed	\$9.44	5.47%	\$13,014,031	\$3,446
Vitamins	\$2.31	1.34%	\$3,184,578	\$843
Bedding	\$3.47	2.01%	\$4,783,759	\$1,267
Vet	\$13.80	7.99%	\$19,024,749	\$5,037
Training	\$81.83	47.38%	\$112,811,247	\$29,868
Groom	\$3.31	1.92%	\$4,563,183	\$1,208
Equipment	\$3.10	1.79%	\$4,273,676	\$1,132
Transportation	\$3.45	2.00%	\$4,756,187	\$1,259
Shoeing	\$4.14	2.40%	\$5,707,425	\$1,511
Boarding	\$25.18	3.64%	\$8,678,318	\$2,298
Race Fees	\$0.00	0.00%	\$0	\$0
Legal	\$1.03	0.60%	\$1,419,963	\$376
Travel	\$1.38	0.80%	\$1,902,475	\$504
Misc.	\$1.72	1.00%	\$2,371,201	\$628
Interest	\$0.26	0.15%	\$358,437	\$95
Horse Insurance	\$2.59	1.50%	\$3,570,587	\$945
Communication	\$0.41	0.24%	\$565,228	\$150
Depreciation	\$28.74	16.64%	\$39,621,108	\$10,490
Investment	\$2.45	1.42%	\$3,377,582	\$894
Linaments	\$2.31	1.34%	\$3,184,578	\$843
Jogger Rental	\$0.00	0.00%	\$0	\$0
Licenses	\$0.69	0.40%	\$951,237	\$252
Total	\$191.61	100.00%	\$238,119,549	\$63,045

Source: Econometric Research Limited

Figure 5
Distribution of Cost of Production
Thoroughbred Race Horses



A number of interesting results are displayed in Table 5. These include:

- Expenditures on horses during the breeding phase are not as large as the expenditures during the racing phase but they involve a rich mix of services and products. While the expenditures during the racing phase have increased measurably as the purses increased with the injection of slot revenues into live racing. The breeding phase expenditures have yet to pick up given the typical five-year cycle of this phase.
- A large number of these expenditures are made in the rural communities where horses are trained and prepared for the races.
- A good share of these expenditures involve manufacturing products, but the majority of the expenditures are on agriculture and services.

Table 5

**Cost of Production - Breeding Phase
Annual Variable Costs**

	Thoroughbred*	Standardbred*	Weighted Average	Total Cost
Wages	20.45%	23.96%	22.29%	\$60,106,076
Benefits	1.28%	2.35%	1.84%	\$4,962,137
Workmens Comp.	0.85%	1.98%	1.44%	\$3,887,125
UI	0.18%	0.20%	0.19%	\$513,676
Contract Labour	0.39%	0.41%	0.40%	\$1,080,034
Agents Fees	0.74%	0.01%	0.36%	\$965,523
Sales Preparation	0.49%	0.58%	0.54%	\$1,448,517
Sales Commissions	2.18%	11.43%	7.02%	\$18,933,469
Advertising	0.96%	2.25%	1.64%	\$4,409,590
Stud Fees	12.63%	2.75%	7.46%	\$20,119,223
Nominations	1.49%	1.11%	1.29%	\$3,482,173
Boarding	1.57%	0.75%	1.14%	\$3,076,976
Professional Services	1.00%	1.13%	1.07%	\$2,880,410
Vet Care	3.28%	3.06%	3.16%	\$8,535,509
Farrier	0.98%	0.98%	0.98%	\$2,643,008
Feed/Bedding	4.47%	4.78%	4.63%	\$12,492,842
Vaning	0.69%	0.83%	0.76%	\$2,058,469
Tack & Supplies	1.62%	0.64%	1.11%	\$2,986,022
Telephone	0.64%	1.12%	0.89%	\$2,403,449
Utilities	1.29%	1.47%	1.38%	\$3,733,088
Office Equipment	0.65%	0.39%	0.51%	\$1,386,089
Travel	0.88%	0.61%	0.74%	\$1,992,274
Fertilizer	0.37%	0.57%	0.47%	\$1,280,122
Gas & Oil	0.52%	0.38%	0.45%	\$1,204,836
Repairs	2.57%	3.40%	3.00%	\$8,102,497
Depreciation - Horse	13.56%	13.02%	13.28%	\$35,808,522
Depreciation - Machinery	5.04%	3.06%	4.00%	\$10,798,324
Automobile	0.59%	0.91%	0.76%	\$2,042,801
Insurance - Horse	3.54%	0.76%	2.09%	\$5,623,898
Insurance - Other	2.83%	4.55%	3.73%	\$10,059,721
Interest	3.80%	3.67%	3.73%	\$10,064,935
Licenses	0.13%	0.07%	0.10%	\$265,928
Sales Tax	0.81%	0.37%	0.58%	\$1,563,574
Property Taxes	0.42%	0.81%	0.62%	\$1,683,108
Other Property Tax	0.08%	0.22%	0.15%	\$413,332
Local Tax	0.16%	0.60%	0.39%	\$1,052,464
Other	6.87%	4.82%	5.80%	\$15,634,949
Total	100.00%	100.00%	100.00%	\$269,694,694

Source: Econometric Research Limited

Table 5a

**Annual Variable Costs of Production
Breeding Phase, Thoroughbred**

Item	Cost
Wages	\$26,292,365
Benefits	\$1,645,683
Workmens Comp.	\$1,092,837
UI	\$231,424
Contract Labour	\$501,419
Agents Fees	\$951,411
Sales Preparation	\$629,988
Sales Commissions	\$2,802,805
Advertising	\$1,234,263
Stud Fees	\$16,238,267
Nominations	\$1,915,678
Boarding	\$2,018,534
Professional Services	\$1,285,690
Vet Care	\$4,217,064
Farrier	\$1,259,976
Feed/Bedding	\$5,747,035
Vaning	\$887,126
Tack & Supplies	\$2,082,818
Telephone	\$822,842
Utilities	\$1,658,540
Office Equipment	\$835,699
Travel	\$1,131,407
Fertilizer	\$475,705
Gas & Oil	\$668,559
Repairs	\$3,304,224
Depreciation - Horse	\$17,433,959
Depreciation - Machinery	\$6,479,879
Automobile	\$758,557
Insurance - Horse	\$4,551,343
Insurance - Other	\$3,638,503
Interest	\$4,885,623
Licenses	\$167,140
Sales Tax	\$1,041,409
Property Taxes	\$539,990
Other Property Tax	\$102,855
Local Tax	\$205,710
Other	\$8,832,692
Total	\$128,569,019

Source: Econometric Research Limited

Table 5b

**Annual Variable Costs of Production
Breeding Phase, Standardbred**

Item	Cost
Wages	\$33,813,711
Benefits	\$3,316,453
Workmens Comp.	\$2,794,288
UI	\$282,251
Contract Labour	\$578,615
Agents Fees	\$14,113
Sales Preparation	\$818,529
Sales Commissions	\$16,130,664
Advertising	\$3,175,328
Stud Fees	\$3,880,956
Nominations	\$1,566,495
Boarding	\$1,058,443
Professional Services	\$1,594,720
Vet Care	\$4,318,446
Farrier	\$1,383,032
Feed/Bedding	\$6,745,807
Vaning	\$1,171,343
Tack & Supplies	\$903,204
Telephone	\$1,580,608
Utilities	\$2,074,547
Office Equipment	\$550,390
Travel	\$860,867
Fertilizer	\$804,416
Gas & Oil	\$536,278
Repairs	\$4,798,273
Depreciation - Horse	\$18,374,563
Depreciation - Machinery	\$4,318,446
Automobile	\$1,284,244
Insurance - Horse	\$1,072,555
Insurance - Other	\$6,421,218
Interest	\$5,179,312
Licenses	\$98,788
Sales Tax	\$522,165
Property Taxes	\$1,143,118
Other Property Tax	\$310,476
Local Tax	\$846,754
Other	\$6,802,257
Total	\$141,125,673

Source: Econometric Research Limited

Table 5c

**Annual Variable Costs of Production
Breeding Phase, Total**

Item	Cost
Wages	\$60,106,076
Benefits	\$4,962,136
Workmens Comp.	\$3,887,125
UI	\$513,675
Contract Labour	\$1,080,034
Agents Fees	\$965,524
Sales Preparation	\$1,448,517
Sales Commissions	\$18,933,469
Advertising	\$4,409,591
Stud Fees	\$20,119,223
Nominations	\$3,482,173
Boarding	\$3,076,977
Professional Services	\$2,880,410
Vet Care	\$8,535,510
Farrier	\$2,643,008
Feed/Bedding	\$12,492,842
Vaning	\$2,058,469
Tack & Supplies	\$2,986,022
Telephone	\$2,403,450
Utilities	\$3,733,087
Office Equipment	\$1,386,089
Travel	\$1,992,274
Fertilizer	\$1,280,121
Gas & Oil	\$1,204,837
Repairs	\$8,102,497
Depreciation - Horse	\$35,808,522
Depreciation - Machinery	\$10,798,325
Automobile	\$2,042,801
Insurance - Horse	\$5,623,898
Insurance - Other	\$10,059,721
Interest	\$10,064,935
Licenses	\$265,928
Sales Tax	\$1,563,574
Property Taxes	\$1,683,108
Other Property Tax	\$413,331
Local Tax	\$1,052,464
Other	\$15,634,949
Total	\$269,694,692

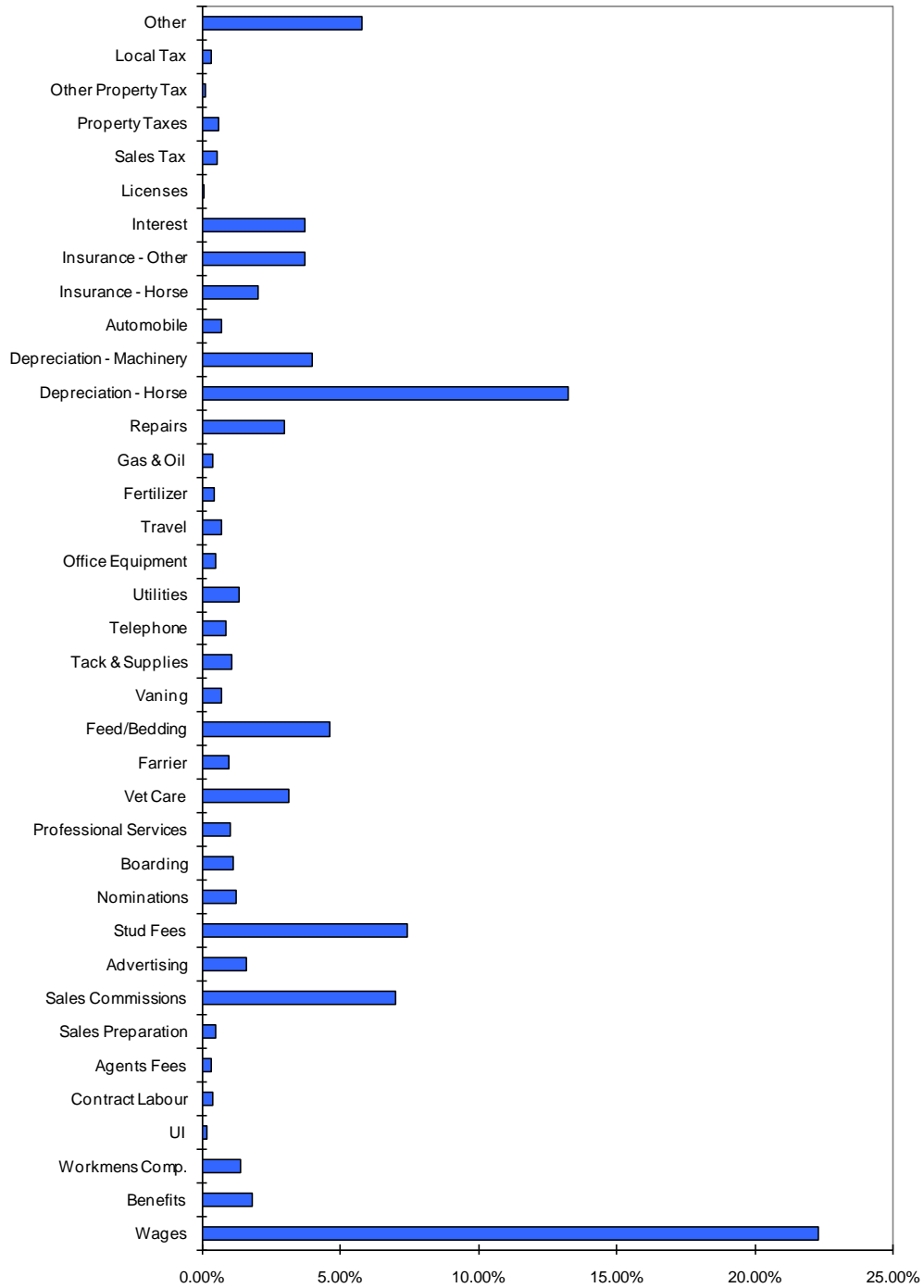
Source: Econometric Research Limited

There are major and significant differences among the cost of production in the breeding phase of thoroughbred and standardbred horses, and among foals, mares and stallions, and yearlings and non-racing two-year-olds.

- The annual variable cost of production of thoroughbred horses in the breeding phase is slightly more than half as large as the corresponding expenditures on standardbred foals, largely due to the differences in horse numbers.
- Expenditures on stud fees, sales' commissions, depreciation, wages and salaries and insurance are more than 50% of the total expenditures on thoroughbred and standardbred mares and stallions in the breeding phase.

The products and services needed to sustain thoroughbred and standardbred foals, mares and stallions and yearlings and non-racing two-year-olds add up to a significant total. The rich mix of these requirements suggests that the horse breeding industry in Ontario has a diversified impact on a wide mix of sectors.

Figure 6
Breeding Phase Cost Distribution by Item



Operational Expenditures to Support Slot Machines at Horse Racing Tracks

The Government of Ontario through the Ontario Lottery and Gaming (OLG) and the race tracks that host slot machines have spent considerable amounts of money to house these machines and to keep them operational. The OLG expenditures on operating these machines for the year 2010 add up to a significant \$571 million. Of this total, \$177 million is paid in payroll expenses to support the employees working on operating and maintaining the slot machines at the tracks and another \$169 million in direct payments to the tracks, about \$165 million are transferred to horse people and promotional expenditures, and \$60 million paid to local governments where the tracks are located (Table 6).

Table 6
Selected Financial OLG Data for 2009-10
Thousands of 2010 Dollars

Facility	Number Number Employees	Annual Payroll (thousands of \$)	Number of Patrons	Number of Slots	Revenue to Tracks (thousands \$)	Revenue to Horse People (thousands \$)	Revenue to Municipality (thousands \$)
Ajax Downs	321	\$12,092	1,232	800	\$11,205	\$7,303	\$5,304
Clinton Raceway	89	\$4,036	169	123	\$1,211	\$1,211	\$605
Dresden Raceway	87	\$4,174	174	116	\$1,322	\$1,322	\$661
Flamboro Downs	222	\$11,179	1,256	804	\$12,100	\$12,100	\$4,456
Fort Erie Race Track	245	\$12,922	898	923	\$4,548	\$3,754	\$1,222
Georgian Downs	304	\$12,402	1,246	802	\$11,259	\$11,259	\$4,705
Grand River Raceway	162	\$6,742	554	240	\$4,305	\$4,305	\$2,152
Hanover Raceway	91	\$4,543	301	131	\$2,180	\$2,180	\$1,090
Hiawatha Horse Park	146	\$7,472	577	452	\$3,124	\$3,124	\$1,560
Kawartha Downs	175	\$8,438	798	450	\$6,825	\$6,825	\$3,413
Mohawk Racetrack	230	\$11,729	1,142	863	\$15,392	\$15,392	\$5,487
Rideau Carleton Raceway	274	\$13,532	1,737	1,250	\$14,427	\$14,427	\$4,444
Sudbury Downs	155	\$7,580	534	351	\$4,871	\$4,871	\$2,435
Western Fair Raceway	314	\$13,770	1,304	750	\$10,121	\$10,121	\$3,846
Windsor Raceway	215	\$10,621	670	750	\$4,232	\$4,232	\$1,608
Woodbine Racetrack	702	\$31,104	4,656	2,085	\$59,779	\$59,779	\$15,907
Woodstock Raceway	88	\$4,515	308	183	\$2,369	\$2,369	\$1,185
Totals	3,820	\$176,851	17,556	11,073	\$169,270	\$164,574	\$60,080

Source: OLG Annual Report, 2009-2010

Horse racing track owners invested heavily in upgrading their facilities for live racing and for housing the gaming areas where slot machines are installed. They have continued to spend on upgrading and renovating their venues, but these expenditures are now routinely made on a yearly basis and are not counted separately.

It is important to note here that the slot machines are typically imported from outside the province and the major share of the common area expenses is already covered by the track operational expenditures. Equally important is the fact that the tracks have spent considerable sums of money on upgrading their facilities in both areas of operations—horse racing and slots. In fact the total capital expenditures of the two parties are almost equivalent with a slight edge in favour of the tracks at the time of initial installation.

The Impact Results

The horse racing and breeding industry in Ontario is credited with about \$2 billion of recurrent expenditures in 2010 dollars. This is over 67% higher than the \$1.2 billion expenditures made by the industry in the year 2000. These expenditures include a number of key components. The largest expenditures of \$802.8 million in 2010 are those made in the racing phase which include expenditures on wages and benefits for labourers, agents' fees, vet care, utilities, property taxes, etc. Similar but lower expenditures of about \$269.7 million are made in the breeding phase in 2010. Ontario Lottery and Gaming (OLG) and the race tracks also made significant expenditures on operations in the same year. OLG spent \$570.8 million on labour and other operating expenditures and the race tracks spent \$346.0 million on concessions, programs, common area expenses, etc. In addition, Associations active in the industry spent \$4.2 million (this includes only the total expenditures of the reporting Associations).

These annual expenditures on the operations of the tracks, relevant Associations, slot machines and breeding and racing horses sustained a total of over \$2.3 billion in value added (income) annually in Ontario (in the year 2000 the impacts were \$1.6 billion). On a per dollar basis, every dollar of expenditure in this industry results in \$1.16 in wages, interest, rent and profits.

***Over \$2.3 Billion of Ontario's Income is Generated Annually by the
Horse Racing and Breeding Industry***

The highest income multiplier (1.41) is associated with the expenditures of the tracks. The income multiplier of the breeding phase expenditures is also high with a value of 1.27 (see Table 7 and figures 7 & 8). These income multipliers compare rather favourably with the average industrial income multiplier of about 1.07 for the province. They exceed many other industrial multipliers because of both a relatively large proportion of labour intensive services in total expenditures and a large local content in these expenditures given the extensive integration of the industry in the rural economy.

Table 7
Economic Impact Of Horse Racing and Breeding in Ontario

(In Thousands of 2010 Dollars)

	Track Expenditures	Association Expenditures	Racing Phase	Breeding Phase	Slot Operations	Total
Impacts						
<i>Initial Expenditures</i>	\$345,990	\$4,233	\$802,855	\$269,695	\$570,775	\$1,993,548
<i>Value Added</i>						
Direct	\$263,100	\$2,952	\$453,141	\$166,041	\$298,461	\$1,183,696
Indirect & Induced	\$226,298	\$2,272	\$477,249	\$176,551	\$237,299	\$1,119,668
Total	\$489,398	\$5,224	\$930,390	\$342,591	\$535,761	\$2,303,364
Multiplier	1.41	1.23	1.16	1.27	0.94	1.16
<i>Gross Output</i>						
Direct	\$345,990	\$4,233	\$802,855	\$269,695	\$570,775	\$1,993,548
Indirect & Induced	\$465,273	\$4,769	\$1,066,790	\$379,603	\$481,472	\$2,397,907
Total	\$811,264	\$9,002	\$1,869,645	\$649,298	\$1,052,247	\$4,391,455
Multiplier	2.34	2.13	2.33	2.41	1.84	2.20
<i>Wages & Salaries</i>						
Direct	\$184,645	\$1,390	\$282,180	\$121,278	\$229,963	\$819,456
Indirect & Induced	\$138,944	\$1,412	\$290,947	\$107,460	\$144,883	\$683,645
Total	\$323,588	\$2,802	\$573,127	\$228,737	\$374,846	\$1,503,100
<i>Employment</i>						
Direct	3,917	26	5,127	2,759	4,507	16,336
Indirect & Induced	3,003	31	6,593	2,394	3,085	15,105
Total	6,919	56	11,720	5,154	7,592	31,441
Multiplier	1.77	2.19	2.29	1.87	1.68	1.92
<i>Taxes</i>						
Federal	\$80,933	\$826	\$154,111	\$56,744	\$90,097	\$382,711
Provincial	\$54,147	\$599	\$103,853	\$35,309	\$67,666	\$261,574
Local	\$16,114	\$178	\$30,907	\$10,508	\$80,217	\$137,925
Total	\$151,193	\$1,603	\$288,871	\$102,561	\$237,980	\$782,209
<i>Imports</i>						
From Other Provinces	\$57,156	\$579	\$141,368	\$49,163	\$56,138	\$304,406
From Other Countries	\$29,340	\$294	\$68,063	\$25,003	\$27,686	\$150,385
Total	\$86,497	\$873	\$209,431	\$74,167	\$83,824	\$454,791

Source: Econometric Research Limited

In the year 2000, 30,940 person years of employment was sustained by the industry. A total of 31,441 person years (full time equivalents) of employment were sustained by these expenditures in 2010. When one considers that much of this employment primarily consists of part time and casual labour, this could easily translate into over 60,000 jobs. Direct employment (16,336 person years) exceeds the indirect plus induced employment of 15,105 person years. It is estimated that between 25,000 and 30,000 Ontarians are engaged in the “equine side” of the industry on a paid or unpaid basis.

31,441 Ontarians Owe Their Permanent Full-time Equivalent Jobs to the Horse Racing and Breeding Industry and Its Associated Activities. Much of this Employment Consists of Part Time and Casual Labour, as Many as 60,000 Ontarians Are Employed In this Industry

The highest employment multiplier (2.29) is that generated by the expenditures in the racing phase followed by the Associations' expenditures with (2.19). Alternatively, the highest direct employment per one million dollars of expenditure is associated with the track operations expenditures with a total of about 11.32 full-time equivalent jobs (this figure was 19 full time equivalent jobs per million of track expenditures in 2000). When total employment is counted this total rises to 20 person years. These employment figures are indicative of a labour-intensive industry. Both, the direct and total employment figures compare well with other labour-intensive industries in Ontario. The effective annual direct wage at the track is about \$47,145. This effective wage rises to \$55,035 in the racing phase and falls to \$43,951 in the breeding phase. The effective direct wage in the industry is now larger than the effective total wage. This reflects a change in the relative sizes of effective direct and effective total wages in the industry from 2000 onwards.

The Effective Direct Average Wage in the Horse Racing and Breeding Industry Exceeds \$50,163 Per Full Time Equivalent Job and is Highest for the Racing Phase at \$55,035

The three levels of government are major recipients of income from this industry's operations. Total tax revenues for all three levels of government are over \$782 million. The lion's share goes to the Federal government with nearly \$383 million, but the provincial and local governments also derive large recurrent revenues in the order of \$262 million and \$138 million, respectively. These revenues do not include the profits that Provincial government derive from the slot revenues.

The Three Levels of Government Derive Over \$782 Million in Tax Revenues on the Impacts of Horse Racing and Breeding in Ontario.

Figures 7 and 8 provide a clear picture of the comparative efficiencies of these impacts by type of expenditure. It is clear that the racing phase makes the largest absolute contributions and the highest relative contributions in terms of gross output, income and employment.

Figure 7
The Economic Impacts of the Ontario Horse Racing and Breeding Industry

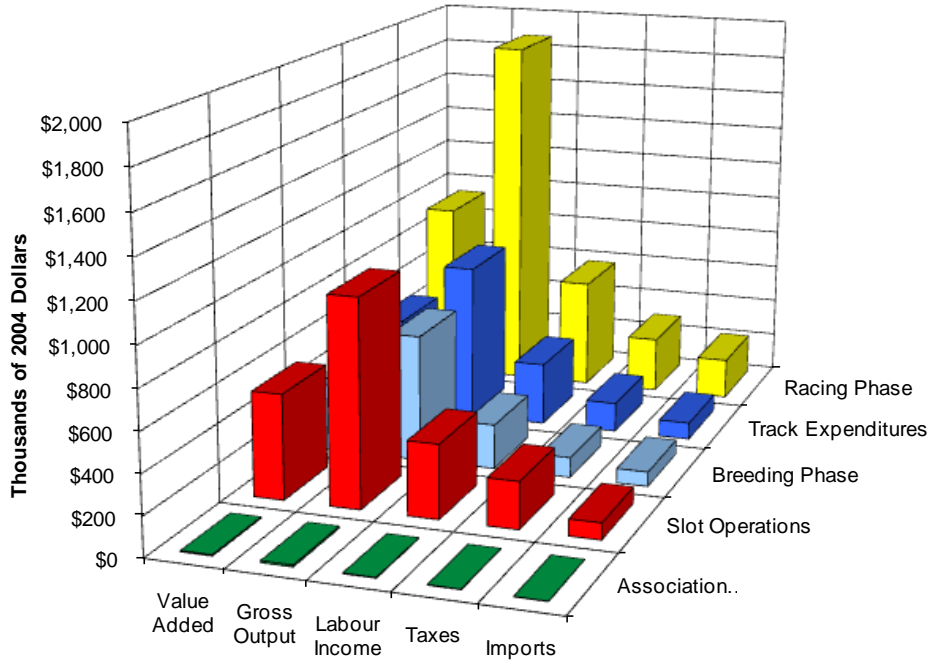
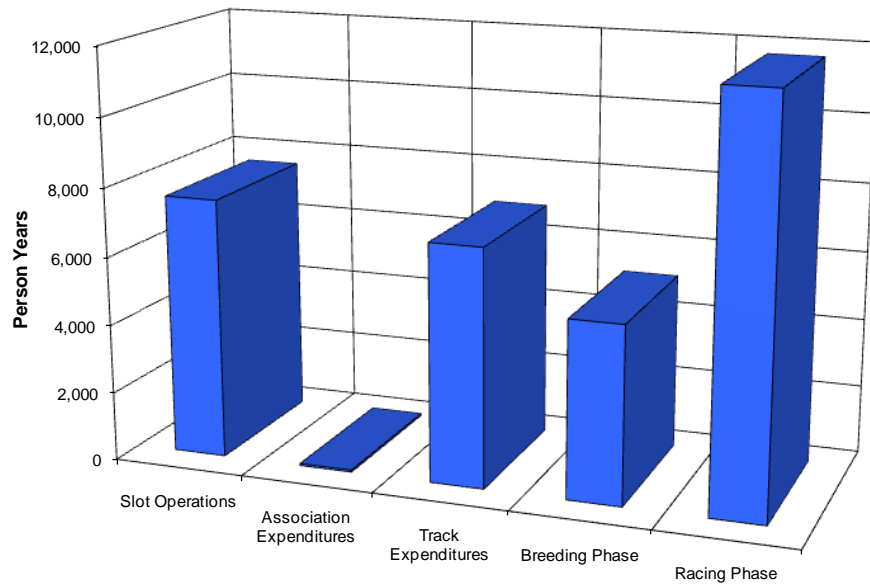


Figure 8
Employment Impacts of the Ontario Horse Racing and Breeding Industry



The employment impacts of the horse racing and breeding industry in Ontario are diffused and cover almost the full spectrum of activities. Table 8 presents these impacts by industry. Naturally, services sectors capture the largest share of the employment impacts, but it is equally true that both agriculture and manufacturing make respectable contributions. Actually, agricultural employment impacts are larger than manufacturing or those associated with utilities and communication (Figure 9). This is indicative of the strong linkages horse racing and breeding maintain with the rural economy in Ontario.

The Employment Impacts of the Horse Racing and Breeding Industry in Ontario are Diffused and Cover Almost the Full Spectrum of Activities.

Table 8
Employment Impacts Of Horse Racing and Breeding in Ontario
Employment by Sector (Person Years)

Sectors	Track Expenditures	Association Expenditures	Racing Phase	Breeding Phase	Slot Operations	Total
Agriculture	78.2	0.4	934.5	2,240.3	49.5	3,303.0
Forestry	2.6	0.0	7.0	4.1	2.1	15.8
Fishing and Trapping	0.3	0.0	0.2	0.2	0.4	1.1
Mining	12.1	0.1	32.3	12.7	11.3	68.4
Primary Industries	93.2	0.5	974.0	2,257.3	63.2	3,388.3
Food and Beverages	138.3	0.5	107.3	53.7	60.7	360.5
Rubber and Plastic	10.9	0.1	22.2	7.6	8.3	49.1
Textiles	1.9	0.0	3.0	1.5	1.9	8.3
Knitting and Clothing	4.6	0.0	3.6	2.6	5.5	16.4
Wood and Wood Products	3.9	0.0	6.0	3.2	2.6	15.8
Furniture and Fixtures	4.4	0.1	8.0	3.3	4.8	20.6
Paper and Paper Products	13.9	0.2	26.3	8.9	9.2	58.4
Printing and Publishing	18.7	0.3	24.2	7.8	8.3	59.2
Primary Metals	19.3	0.2	106.9	27.6	17.1	171.1
Metal Fabricating	17.8	0.2	172.3	40.7	13.0	244.0
Machinery and Equipment	11.0	0.2	274.3	32.9	8.6	326.9
Transportation Equipment	56.1	0.5	178.5	58.4	60.1	353.6
Electrical Products	6.5	0.1	33.7	7.6	5.3	53.2
Non-Metalic Minerals	5.7	0.1	12.2	4.6	4.1	26.6
Petroleum Products	40.3	0.5	148.3	62.2	37.4	288.7
Chemical Products	35.2	0.3	210.2	46.1	29.4	321.2
Misc. Manufacturing	6.0	0.1	8.0	4.0	6.9	24.8
Manufacturing Industries	394.5	3.4	1,345.0	372.2	283.1	2,398.3
Construction	125.9	1.3	118.2	91.5	66.0	402.8
Utilities & Communications	57.2	0.3	68.0	33.0	31.3	189.8
Trade and Finance	933.6	10.8	2,048.3	696.6	1,274.3	4,963.5
Transportation and Storage	162.9	2.6	723.8	141.2	137.9	1,168.3
Other Services	5,151.8	37.7	6,443.1	1,562.0	5,735.8	18,930.4
Services	6,248.2	51.0	9,215.2	2,399.8	7,148.0	25,062.2
Total	6,919.1	56.4	11,720.3	5,153.8	7,591.7	31,441.3

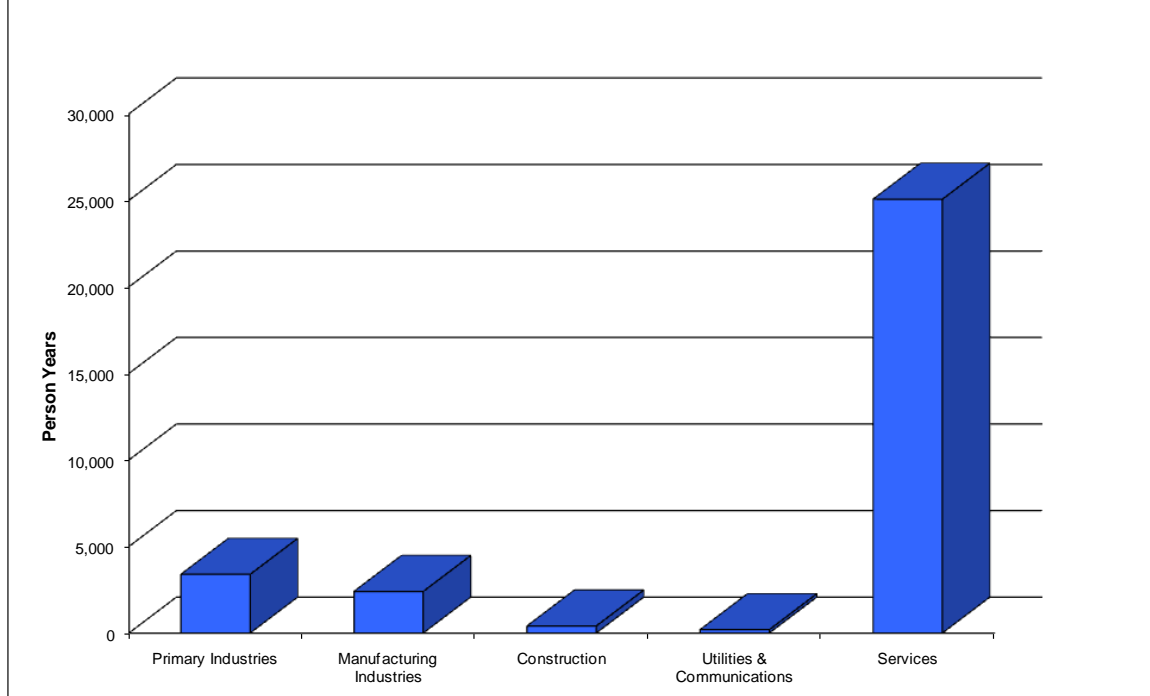
Source: Econometric Research Limited

The links of this industry to the rural economy are substantive and complex. A significant horse breeding industry is needed to produce the horses for the racing phase. Thousands of acres of agricultural land and many workers are needed to care, train and groom the animals and maintain the farms where they reside. The gestation period of horses is over 11 months and horses do not start to race until they reach the age of two or three. This means that about three to four years of time and resources are spent on producing and training each horse before it ever reaches the track. It is equally true that most of the veterinarians, blacksmiths, farriers, hay and grain suppliers, transportation workers, harness and saddle makers and many others who provide services and products needed to breed, maintain and train the horses are located in the rural parts of the province. This is why the industry is a critical sector in the rural economy and represents a viable vehicle for connecting the urban entertainment sectors to the rural sectors of the province. All of these impacts are contingent on keeping the horses in Ontario. The incentive programs should be designed with this in mind.

The Industry is A Critical Sector in the Rural Economy and Represents a Viable Vehicle for Connecting the Urban Entertainment Sectors to the Rural Sectors of the Province.

A good number of the jobs in the services and manufacturing sectors are also in the agricultural industry and/or in the rural economy. These are typically the farriers, trainers, transportation workers, hay and grain suppliers, harness and saddle makers, feed manufacturers, etc. While most of these workers are directly involved in the horse breeding and racing industry, an equal number are involved indirectly in sustaining the operations of the industry. Again, a good number of them are in the rural areas of the province.

Figure 9
Comparative Employment Impacts of Horse Racing and Breeding
By Sector



Limitations

The following outlines salient limitations imposed on the approach and findings of this analysis.

- An effort has been made to ensure that the estimates in the Report are made in a conservative manner to avoid overstating the results. For example, the total operational expenditures do not include the expenditures made by the Horse Improvement Program.
- Benefits are not always easily expressed in monetary terms. For example, social benefits from horse racing are not easily measured. In these cases we have endeavoured to demonstrate the nature and extent of benefits realised in the province of Ontario through other narrative means.
- This research program involved the administration of surveys to race tracks and race related Associations but did not include a survey of patrons or horse people. Data was collected from various sources and from industry participants but was not verified directly by ERL.

- Since the impact results are based on data sets compiled from a variety of sources, they are not strictly statistically reliable and are therefore subject to a margin of error.
- The model used is a simulation model and, as such, it creates a theoretical picture of the future of the provincial economy, it does so on the basis of a series of assumptions.
- The number of horses may be overstated because we did not take into account the effects of deaths and injuries on the existing stock, but we also understate the total number of horses as we have excluded a number of horses on the farms during the breeding phase.

Conclusions

Horse racing and breeding are basically rural activities which assume a critical function in shoring both the rural economy of Ontario and diversifying its income sources. The impact results indicate a relatively high level of efficiency in the creation of jobs per dollar of expenditure and very large returns to all levels of government. All the multipliers reported here are relatively high and compare rather favourably with other tourism or even industrial multipliers.

A number of findings of the study are summarised below:

- The horse racing and breeding industry is an agricultural based industry that will also augment and diversify the tourism, entertainment and export economic base of Ontario.
- The horse racing and breeding industry in Ontario is credited with \$2 billion of recurrent expenditures in 2010 dollars.
- Today the Ontario horse racing industry is hi-tech, a vibrant partner in the entertainment business and is a key node in the New Digital Economy. It combines slot machines with live racing, receives and transmits racing signals to/from the rest of the world, and wagers are accepted over the telephone, internet and mobile devices and are made into many teletheatres managed by the industry at several locations outside the tracks.
- Over 31,441 Ontarians owed their permanent jobs to the horse racing and breeding industry in the province in 2010. In fact, many more Ontarians work in the industry on a part-time basis. A total of about 60,000 people are employed in this industry when both part-time and casual labour is included.

- All three levels of government realise substantial revenues on the horse racing and breeding industry expenditures (\$782 billion compared to \$576 million in the year 2000). The Federal government realised \$383 million, whereas the Provincial government realised \$262 million (exclusive of the slot machine profits at the tracks). The remaining \$138 million goes to local governments in the province. This total is inclusive of the slot machine revenues paid to host municipalities where the tracks are located.
- A total of \$1.5 billion in wages and salaries in Ontario are sustained annually by the total expenditures of the provincial horse racing and breeding industry. This total was 50% larger than the \$1 billion in the year 2000.
- The effective average direct wage in the racing phase is \$55,035 and \$47,145 at the tracks. The effective wage of slot operations exceeds \$50,163 annually. These wages are not much different from some of the highest industrial wages in Ontario.
- The employment impacts of the horse racing and breeding industry in Ontario are diffuse and cover almost the full spectrum of activities. Many of the jobs reflect the strong linkages of horse racing with agriculture, the agricultural manufacturing sector, the agricultural services sector, and the rural economy.
- The economic contributions of the horse racing and breeding industry to the rural economy compare favourably and exceed the individual contributions of wheat, eggs, poultry and hogs in 2010. It is our estimate that the horse racing and breeding industry is among the top four subsectors contributing activities to the rural economy (along with dairy products; fruits and vegetables, soybeans and corn).
- The links of this industry to the rural economy are substantive and complex. A significant horse breeding industry is needed to produce the horses for the racing phase. Thousands of acres of agricultural land and many workers are needed to care, train and groom the animals and maintain the farms where they reside. The gestation period of horses is over 11 months and horses do not start to race until they reach the age of two or three. This means that about three to four years of time and resources are spent on producing and training each horse before it ever reaches the track.
- Activities such as the breeding, raising and training of horses are perfectly suited to greenbelt area and the sub prime agricultural land considered productive for more intense forms of agriculture
- Most of the veterinarians, blacksmiths, farriers, hay and grain suppliers, transportation workers, harness and saddle makers and many others who provide services and products needed to breed, maintain and train the horses are located in the rural parts of the province.

- Many racehorses ultimately fill the ranks of pleasure horses, jumpers, and dressage animals, thus continuing the need for labour, feed and supplies.