

THOROUGHBRED RACING IN ASIAN RACING FEDERATION JURISDICTIONS

AN ECONOMIC AND SOCIAL IMPACT ASSESSMENT



Shatin Racecourse, Hong Kong
Image Credit : The Hong Kong Jockey Club



CONTENTS

| | |
|---|-----------|
| <i>KEY FINDINGS</i> | <i>04</i> |
| <i>INTRODUCTION</i> | <i>08</i> |
| <i>THOROUGHBRED RACING IN ASIAN RACING FEDERATION JURISDICTIONS</i> | <i>12</i> |
| <i>DIRECT SPENDING BY THE THOROUGHBRED RACING INDUSTRY IN ASIAN RACING FEDERATION JURISDICTIONS</i> | <i>16</i> |
| <i>ECONOMIC CONTRIBUTION OF THE THOROUGHBRED RACING INDUSTRY</i> | <i>18</i> |
| <i>PARTICIPANTS IN THOROUGHBRED RACING</i> | <i>22</i> |
| <i>EMPLOYMENT GENERATED BY THE THOROUGHBRED RACING INDUSTRY</i> | <i>24</i> |
| <i>BROADER SOCIETAL IMPACTS</i> | <i>26</i> |
| <i>MAJOR BREEDING IN ASIAN RACING FEDERATION JURISDICTIONS</i> | <i>34</i> |
| <i>OWNERSHIP AND TRAINING</i> | <i>36</i> |
| <i>RACING CLUBS & OPERATORS</i> | <i>38</i> |
| <i>APPENDIX</i> | <i>43</i> |

KEY FINDINGS

ECONOMIC IMPACTS



US\$26.9 BIL

GROSS VALUE ADDED
GENERATED BY
THOROUGHBRED
RACING

DIRECT & FIRST ROUND IMPACT

US\$10.8 BIL

INDUCED IMPACT

US\$16.1 BIL



570,546

JOBS SUSTAINED BY
RACING INDUSTRY
ACTIVITY

DIRECT & FIRST ROUND IMPACT

301,661

INDUCED IMPACT

268,885



US\$14.5 BIL

HOUSEHOLD
INCOME
GENERATED



US\$6.9 BIL

TAXATION
REVENUE
CREATED

“IN 2018/19, THE THOROUGHBRED RACING INDUSTRY IN THE ASIAN RACING FEDERATION JURISDICTIONS GENERATED US\$26.9 BILLION IN GDP. THIS ACTIVITY SUSTAINED MORE THAN 570,000 JOBS IN THE REGION ”



Gauteng Summer Cup, Turffontein Racecourse
Image Credit: Racing. It's a Rush.

PRIZEMONEY



US\$2.1 BIL

PRIZEMONEY
ON OFFER

SOURCES OF EXPENDITURE



US\$1.6 BIL

BREEDING -
PRODUCTION OF
FOALS



US\$2.5 BIL

TRAINING -
PREPARATION OF
RACEHORSES



US\$15.2 BIL

RACING & WAGERING
ACTIVITIES

TOTAL DIRECT SPENDING
GENERATED

US\$19.3 BIL



Veliefendi Racecourse, Istanbul
Image Credit: Jockey Club of Turkey

KEY FINDINGS

RACEHORSES



28,580

FOALS



43,862

BROODMARES
COVERED



1,109

STALLIONS



83,237

HORSES
IN TRAINING

HORSE RACING



532

RACING
CLUBS



6,799

RACE
MEETINGS



504

RACECOURSES



55,839

RACES



82,230

UNIQUE
STARTERS



33.6 MIL

ATTENDANCES

“IN 2018/19, THOROUGHBRED RACING IN THE ASIAN RACING FEDERATION JURISDICTIONS WAS RESPONSIBLE FOR DELIVERING CHARITABLE CONTRIBUTIONS IN EXCESS OF US\$834 MILLION”

PARTICIPANTS IN RACING



7,058

HORSE
TRAINERS



28,611

STABLE
EMPLOYEES



75,271

RACING CLUB & PEAK
RACING ASSOCIATION
EMPLOYEES



149,827

RACEHORSE
OWNERS



3,588

JOCKEYS &
APPRENTICES



15,462

VOLUNTEERS

**TOTAL PARTICIPANTS
IN RACING**

279,817*

* The number of participants in racing is likely to be higher than this amount due to the number of thoroughbred breeders being unknown



Image Credit: Bradley Photographers.

INTRODUCTION

The Asian Racing Federation (ARF) is a regional federation comprising 28 national racing authorities and racing-related organisations. The origins of the ARF can be traced back to 1960 when the first Asian Racing Conference (ARC) was held in Tokyo. The ARF was formally established as a permanent organisation at the 28th ARC in 2001.

Today, the ARF continues to:

1. organise the ARC and other racing events in member countries to foster goodwill and mutual understanding between members and other key stakeholders in racing and other sports;
2. promote horseracing and breeding, and the integrity and prestige of the sport;
3. encourage and develop mutually beneficial objectives and strategies between racing organisations;
4. exchange ideas and information on matters connected with horseracing; and
5. encourage, promote and support international competition for jockeys and horses

The ARF is formally linked with the International Federation of Horseracing Authorities (IFHA). Australia, Hong Kong and Japan have permanent seats on the Executive Council of the IFHA.

PURPOSE OF THE STUDY

The ARF engaged IER to conduct this study which aims to quantify the economic and social contribution that the thoroughbred racing industry generates nationally in ARF member jurisdictions. This study is based on the key figures from the 2018/19 racing season and is presented as a representation of the impacts generated in a typical racing season.

The key focus of the study is to investigate the following outcomes attributable to the thoroughbred racing industry:

- + The employment generated by thoroughbred racing industry activities
- + The number of participants (i.e. trainers, breeders, owners etc.) in the industry
- + The total direct expenditure that the industry makes, in its current form, to the economies
- + The extent to which the thoroughbred racing industry contributes to the combined Gross Domestic Product of these jurisdictions
- + The social and community importance of thoroughbred racing

RESEARCH METHODOLOGY

In assessing the size and scope of the thoroughbred racing industry, the study takes into account a number of the traditional measures adopted by the racing industry (such as breeding and training activities, attendance and wagering) as well as calculating a number of economic measures.

For the purpose of this study, the racing industry is defined as covering the full spectrum of activities associated with the conduct of thoroughbred racing across the footprint of ARF members.

The data that underpins this study has been gathered from a number of sources. These are outlined below:

- + The Australian Stud Book provided breeding-related data
- + OECD wage and output data
- + ARF Secretariat
- + Data supplied by ARF members*
- + Prior research undertaken by IER in some jurisdictions
- + Secondary research

Throughout the report, data has been presented in aggregate format.

ECONOMIC METHODOLOGY

The development of an economic model of the thoroughbred racing industry requires a strong understanding of the internal and external flows of money. An understanding of the intricate and sometimes complex flow of money in the racing industry underpins this assessment. The thoroughbred racing industry is built on a series of inter-related sectors which see funds flowing back and forth, with one sector's expenditure often representing another sector's revenue. For instance, punters bet on thoroughbred racing (expenditure) which sees funds flow through to principal racing authorities (revenues).

IER utilised an input-output methodology for the calculation of economic impacts associated with the thoroughbred racing industry in each jurisdiction. Models relevant to each region were developed and used to determine these impacts. IER sourced the input-output tables from the Organisation for Economic Co-operation and Development (OECD). The input-output tables were based on 2015 figures and converted to 2019 figures based on exchange rate shifts per country.

*It is noted that the China Equestrian Association (CEA) joined the ARF as an Associate Member in February 2020 after the 2018/19 season covered by this study.

MEMBERS OF THE ARF

21 Full Members
1 Associate Member
6 Affiliate Members



Some of these funds then flow to racing clubs (funding operational expenditure) and participants (prizemoney). IER has taken care throughout the model to ensure that duplicate expenditures have been identified and excluded from the total expenditure calculations. In this regard, the key is to identify the final expenditures – ensuring not to count the same expenditures as they flow between internal racing industry transactions.

The final expenditure profile of the thoroughbred racing industry is based on the following key inputs: –

- + Production (breeding-related activities) of racehorses – the expenditure generated by the breeding sector in maintaining breeding animals
- + Preparation (training-related activities) of racehorses for racing – the expenditure by owners and trainers on training services as well as other non-training related expenses such as major veterinary, transport etc.
- + Net wagering revenues – otherwise known as revenues generated from punter losses. Whilst it varies across the jurisdictions, these revenues flow through to the economy via Government

taxes, wagering operator revenues and racing industry funding (which is used to fund operational costs and prizemoney)

- + Peak racing body and operator expenditure – on maintaining facilities, running race meetings, marketing and administration
- + Racing customer expenditure – expenditure made by racegoers. This includes spending at the races as well as spending in the community linked to their attendance at the races.

It is important to note that racing & wagering are assessed as a complete unit because they are so completely entwined. In many jurisdictions, peak racing associations generate a significant portion of their income from wagering revenues. These wagering revenues are used to fund prizemoney, infrastructure projects and operations of racing clubs. Racing clubs then run race meetings where punters bet on the racing product and the cycle continues.

The economic model used within this study follows three key steps: –

1. Gathering Industry Expenditure

This involves the collection and collation of expenditure data from all available sources within the industry

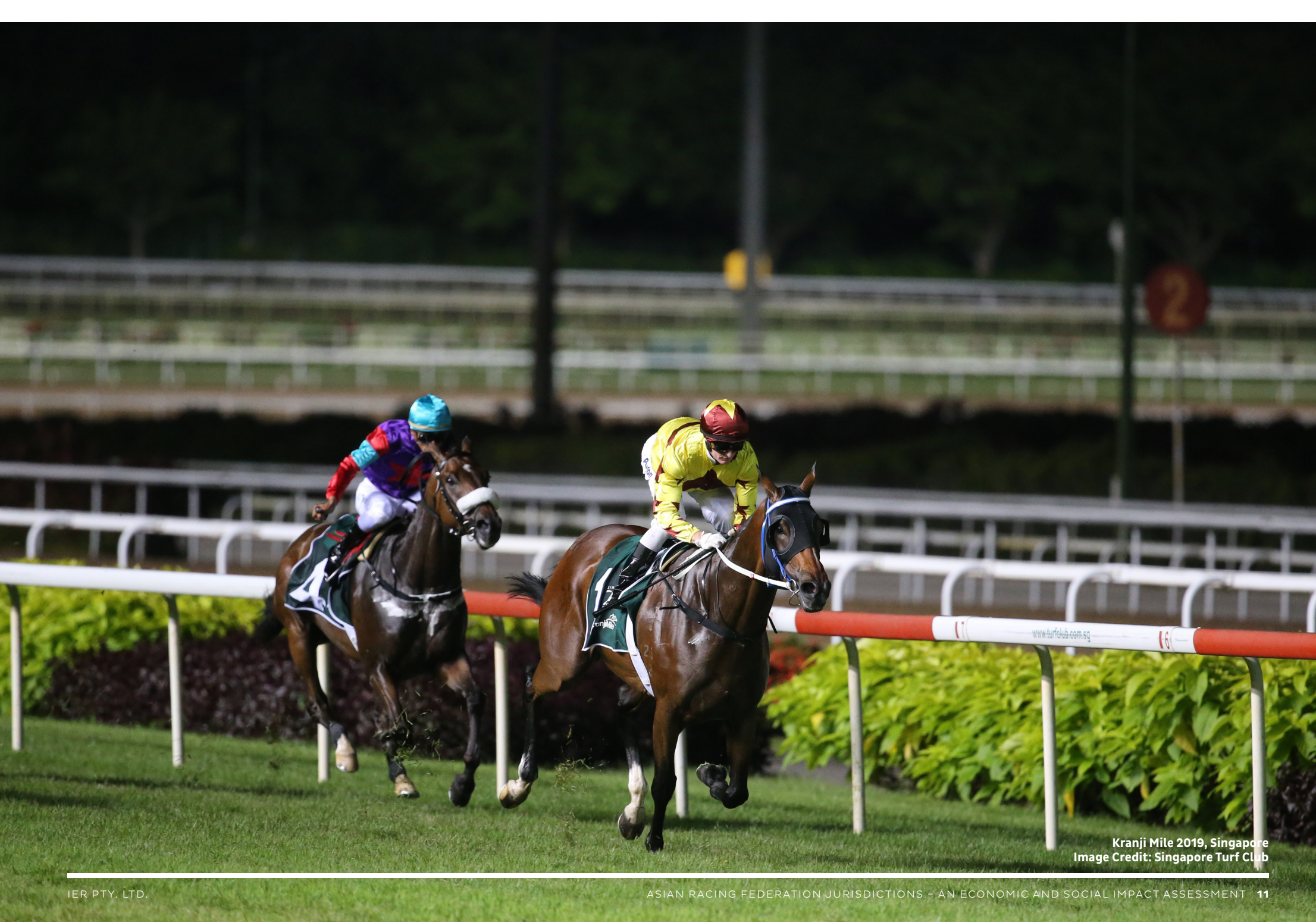
2. Categorisation of industry expenditure into industry classifications

This involves the translation of final expenditures into various industries which enables detailed modelling to be undertaken (this also allows for determination of both the direct and indirect economic impacts)

3. Economic modelling

IER has utilised an input/output methodology for the calculation of economic impacts associated with the thoroughbred racing industry. Models relevant to each jurisdiction have been developed and used to determine these impacts.

The report illustrates impacts in US\$. Please note that conversions from local currencies were based on exchange rates as at June 30, 2019.



Kranji Mile 2019, Singapore
Image Credit: Singapore Turf Club

THOROUGHBRED RACING IN ASIAN RACING FEDERATION JURISDICTIONS

Thoroughbred racing in Asian Racing Federation jurisdictions is significant in size and scale. Principal racing authorities within each country, state, province and region are generally charged with the responsibility of running their industry whilst racing clubs manage the day-to-day operation of racing activities. There are 532 thoroughbred racing clubs/operators, managing 504 racing venues.

In 2018/19, there were 6,799 race meetings held in Asian Racing Federation jurisdictions, hosting more than 55,839 races. It is estimated that around 5% of races hold group or listed classification.

The racing program in 2018/19 provided an opportunity to race for more than 82,000 racehorses. These racehorses competed for approximately US\$2.1 billion in prizemoney. When various breeder and owner incentives are included, racehorse owners competed for just over US\$2.8 billion in that season.

KEY RACING STATISTICS



**RACING CLUBS/
OPERATORS** 532



RACES 55,839



RACECOURSES 504



**UNIQUE
STARTERS** 82,230



RACE MEETINGS 6,799



ATTENDANCES 33.6 MILLION





Winx, prior to winning her fourth Ladbrokes Cox Plate in 2018, Moonee Valley, Melbourne
Image Credit: Racing Photos

KEY RACING STATISTICS



VALUE ADDED CONTRIBUTION TO THE ECONOMY

US\$26.9 BILLION



JOBS SUPPORTED BY RACING INDUSTRY ACTIVITY

570,546



HOUSEHOLD INCOME GENERATED

US\$14.5 BILLION



TAXATION REVENUE CREATED

US\$6.9 BILLION

Thoroughbred racing generates significant economic and social impacts. From a social perspective, thoroughbred racing plays an important role in community building and inclusiveness, particularly in terms of participants in the industry. In many places, thoroughbred racing is one of the oldest leisure pursuits whilst in regional areas, club infrastructure is often an important community asset for more than just the racing industry. Additionally, racing authorities and racing clubs actively contribute to society through their community and philanthropic initiatives.

Economically, thoroughbred racing is a significant contributor to the economy (both in terms of contribution to GDP and also generation of employment opportunities).

Thoroughbred racing in Asian Racing Federation jurisdictions is responsible for generating more than US\$26.9 billion in value added contribution to the economy. In many jurisdictions, this economic impact is most heavily driven by wagering revenues. However, the investment by the breeding and training sectors is also a large driver of direct and indirect impacts.

This economic activity is responsible for supporting 570,546 jobs across Asian Racing Federation jurisdictions. A sizeable part of this impact occurs in areas where individuals with particular skills are employed to pursue their interests in horseracing and equine welfare.

The employment supported by the thoroughbred racing industry is responsible for generating more than US\$14.5 billion in household income.

JAPAN

| Rank | Race | Rank | Race |
|------|---------------------------------|------|----------------------------------|
| #5 | Takarazuka Kinen | #46= | Japan Cup (Deep Impact Memorial) |
| #6= | Arima Kinen (The Grand Prix) | #59= | Mile Championship |
| #13= | Tenno Sho (Autumn) | #59= | Osaka Hai |
| #22= | Yasuda Kinen | #71= | Tenno Sho (Spring) |
| #32= | Tokyo Yushun (Japanese Derby) | #89= | Champions Cup |
| #36= | Satsuki Sho (Japanese 2000 Gns) | | |

HONG KONG

| Rank | Race | Rank | Race |
|------|----------------------------|------|---|
| #10= | FWD QEII Cup | #27 | Chairman's Sprint Prize |
| #13= | LONGINES Hong Kong Vase | #32= | Stewards' Cup |
| #19= | Queen's Silver Jubilee Cup | #55= | LONGINES Hong Kong Cup (2000m) |
| #22= | LONGINES Hong Kong Sprint | #79= | Centenary Sprint Cut (1200m) |
| #24= | LONGINES Hong Kong Mile | #79= | Standard Chartered Champions & Chater Cup |

UNITED ARAB EMIRATES

| Rank | Race | Rank | Race |
|------|----------------------------------|------|--|
| #17= | Dubai Turf Sponsored by DP World | #40= | Al Quoz Sprint Sponsored by Azizi Developments |
| #28= | LONGINES Dubai Sheema Classic | #46= | Dubai World Cup Sponsored by Emirates Airline |

SOUTH AFRICA

| Rank | Race | Rank | Race |
|------|------------------------------------|------|------------------------------------|
| #31 | Rising Sun Gold Challenge | #59= | World Sports Betting Champions Cup |
| #40= | Sun Met Celebrated with G. H. Mumm | #79= | Vodacom Durban July Handicap |
| #46= | L'Ormarins Queen's Plate | | |

AUSTRALIA

| Rank | Race | Rank | Race |
|------|--------------------------------------|------|--------------------------------------|
| #6= | LONGINES Queen Elizabeth Stakes | #59= | De Bortoli Wines Golden Rose |
| #9 | Ladbrokes Cox Plate | #59= | New Zealand Bloodstock Memsie Stakes |
| #13= | TAB Chipping Norton Stakes | #59= | Winx Warwick Stakes |
| #28= | Darley Sprint Classic | #59= | Yulong Futurity Stakes |
| #32= | Colgate Optic White Stakes | #72= | Seppelt Wines Newmarket Handicap |
| #36= | Aquis T. J. Smith Stakes | #72= | TAB Doomben 10,000 |
| #40= | Agency George Ryder Stakes | #79= | Ranvet Stakes |
| #40= | Seppelt Mackinnon Stakes | #89= | Ladbrokes Caulfield Stakes |
| #46= | PFD Food Services Makybe Diva Stakes | #89= | The Star Doncaster Mile Handicap |
| #59= | Black Caviar Lightning Stakes | #96= | Charter Keck Cramer Moir Stakes |

*“ARF MEMBERS
HOSTED
APPROXIMATELY
50% OF THE IFHA'S
TOP 100 GROUP/
GRADE ONE RACES
GLOBALLY”*

RACES IN THE LONGINES TOP 100
GROUP/GRADE RACES - 2019



Xi Yu Racecourse, Zhao Su, Xin Jiang Province
Image Credit: China Horse Industry Association

DIRECT SPENDING BY THE THOROUGHBRED RACING INDUSTRY IN ASIAN RACING FEDERATION JURISDICTIONS

In 2018/19, thoroughbred racing throughout the Asian Racing Federation footprint generated more than US\$19.3 billion in direct expenditure. Spending generated by racing participants, businesses and customers as a result of the racing industry's existence included¹:

- + Spending by owners on the preparation of racehorses for racing
- + Spending by breeders on the production of foals, maintenance of stallions and broodmares, and preparation of foals for sale
- + Revenues generated by peak racing associations, primarily from wagering (in some jurisdictions) and other business activities including media, publications and gaming (in some jurisdictions). Some peak racing associations also have additional non-racing revenue streams such as hospitality and farming activities
- + Revenue generated by racing clubs (excluding any distributions received from peak racing associations)
- + Spending by racegoers, off-course, as a result of their engagement with racing (i.e. buying fashion to attend the races)

The breeding sector, through its activities in producing foals, is directly responsible for creating an expenditure impact of more than US\$1.6 billion. This study was able to evaluate the breeding industry in six regions of the Federation, and it is noted that Australia, Japan and New Zealand account for more than 90% of the breeding activity.

The training sector, through its activities in preparing horses for racing, is responsible for creating an expenditure impact of US\$2.5 billion. In many jurisdictions, the training activity is often centred on major racetracks.

However, there are some regions where private training properties supplement the use of industry racetracks.

Racing & wagering activities generate more than US\$15.2 billion in expenditure. Overall, net wagering revenues (including product fee payments to the industry) make up the largest proportion of this spending whilst also being the largest funding source for the industry. Racing & wagering are closely entwined as funding sources and beneficiaries of racing product. Without thoroughbred racing, the wagering industry would be smaller in size.

However, without wagering, an important source of funding for the racing industry would not exist.

SOURCES OF FINAL EXPENDITURE



BREEDING - PRODUCTION OF FOALS

US\$1.6 BILLION



TRAINING - PREPARATION OF HORSES FOR RACING

US\$2.5 BILLION



RACING & WAGERING ACTIVITIES

US\$15.2 BILLION

¹ The calculation of direct expenditure is based on the sum of the spending made by racing industry participants, businesses and customers as a result of racing industry's operations in the jurisdictions.



Image Credit: Macau Jockey Club

ECONOMIC CONTRIBUTION OF THE THOROUGHBRED RACING INDUSTRY

The expenditure generated by the thoroughbred racing industry leads to economic impacts generated for the broader economy.

The thoroughbred racing industry is responsible for generating a direct and first round value added impact of US\$10.8 billion (GDP). This comprises expenditures by the

racing industry as well as the wages, salaries and gross operating surplus of the businesses that supply goods and services to the racing industry.

In addition, there are induced value added impacts derived as a result of the racing industry activity. These induced value added impacts include production-based impacts

(i.e. the chain of activities when retailers transact with wholesalers, who in turn transact with manufacturers and raw material providers) and consumption impacts (e.g. when workers spend their wages and salaries earned as a result of racing industry activity).

When the flow-on (induced value-added) impacts of this created demand are also considered, the total value added impact rises to \$26.9 billion in GDP.

Generally, the level of economic activity will not always proportionally follow the origin of expenditures. Regions will have differing capacities of meeting the created demand, meaning that some will have higher import penetrations than others. Additionally, different countries within the Asian Racing Federation jurisdictions will have different macroeconomic conditions (particularly around wages and relative purchasing power) which will be reflected in overall impacts.

TAXATION REVENUES

The activity of the racing industry also stimulates a level of taxation revenue that is an important source of revenue for Governments through the Asian Racing Federation jurisdictions.

Taxes are accrued in various forms, including: -

- + Payroll Taxes
- + Goods & Services Taxes
- + Income Taxes (for some racing organisations)
- + Gaming Taxes
- + Wagering Taxes
- + Property and Land Taxes

In 2018/19, Asian Racing Federation jurisdictions generated a combined total of more than US\$6.9 billion in taxation revenue for Governments.

ECONOMIC IMPACTS GENERATED



DIRECT & FIRST ROUND VALUE ADDED IMPACT

US\$10.8 BILLION



INDUCED VALUE ADDED IMPACT

US\$16.1 BILLION



TOTAL VALUE ADDED CONTRIBUTION TO THE ECONOMY

US\$26.9 BILLION

TAXATION REVENUES GENERATED



TAXATION REVENUE GENERATED

US\$6.9 BILLION



Tokyo Racecourse
Image Credit: Japan Racing Association



2018 Lexus Melbourne Cup, Flemington, Melbourne
Image Credit: Racing Photos

VICTORIAN SPRING RACING CARNIVAL - MAJOR RACING EVENTS AND TOURISM

One of the world's major sporting occasions, the Victorian Spring Racing Carnival comprises more than 20 Group 1 races, over US\$59.2 million in prizemoney and features the prestigious US\$5.1 million Melbourne Cup. Along with great races such as the Caulfield Cup and Cox Plate, the Carnival showcases countless Country Cups throughout regional Victoria.

The nexus between the racing industry and tourism has been established over many years. At a regional level, racing events are an important part of driving both intrastate and out-of-state visitors to regional parts of

Victoria. From a State-wide perspective, major racing events have the ability to generate economic impacts for the State, not only from visiting attendees, but also from visiting participants.

The Victorian Spring Racing Carnival is one of the pinnacles of the Australian sporting and events calendar. Over nearly three months from September to November, it captures the attention of global racing and non-racing fans alike. Referred to as 'the race that stops a nation', the Melbourne Cup continues to expand its national and international footprint thus delivering continued growth in its

economic value to the Victorian economy. In 2019, there were 617,527 attendees at the Victorian Spring Racing Carnival featured racing events, injecting US\$196.2 million directly into the Victorian economy. When considering total spending by all attendees at the Victorian Spring Racing Carnival, the event generated a gross economic benefit of US\$521.8 million.

Over the last two decades, the Victoria Racing Club has been successful in attracting increasing numbers of world class horses to run during their four-day Melbourne Cup Carnival. During this period, more than 240 international horses have competed in the Melbourne Cup (excluding NZ). Many of these horses also run in lead-up races meaning that their (and their connections') length of stay in Victoria is expansive. In 2019, 17 international trainers travelled to Melbourne to participate in the Victorian Spring Racing Carnival.

Despite challenging global economic conditions, 2019 saw growth of 13.0% in spending on fashion items. The most purchased fashion item were hats/fascinators (with 103,565 purchased) with total fashion expenditure amounting to US\$42.0 million.



“THE ATTRACTION OF OUT-OF-STATE INVESTMENT, THROUGH BOTH BUSINESS AND CONSUMER ENGAGEMENT, IS RESPONSIBLE FOR DELIVERING US\$196.2 MILLION VALUE ADDED IMPACT TO THE VICTORIAN ECONOMY”

PARTICIPANTS IN THOROUGHBRED RACING

The concept of 'participation in racing' is broader than simply considering those employed in the industry. Participants include employees, trainers, breeders, owners, contractors and volunteers who have varying levels of engagement, from occasional to full-time.

Participants are the lifeblood of the racing industry. As a world class sport, racing produces elite athletes and highly trained horsemen who compete at the top of their game. For so many of the broad range of racing's participants, the sport is their livelihood. All participants are united by their professionalism and passion for the sport. Passion drives many to pursue the challenges and opportunities available in thoroughbred racing.

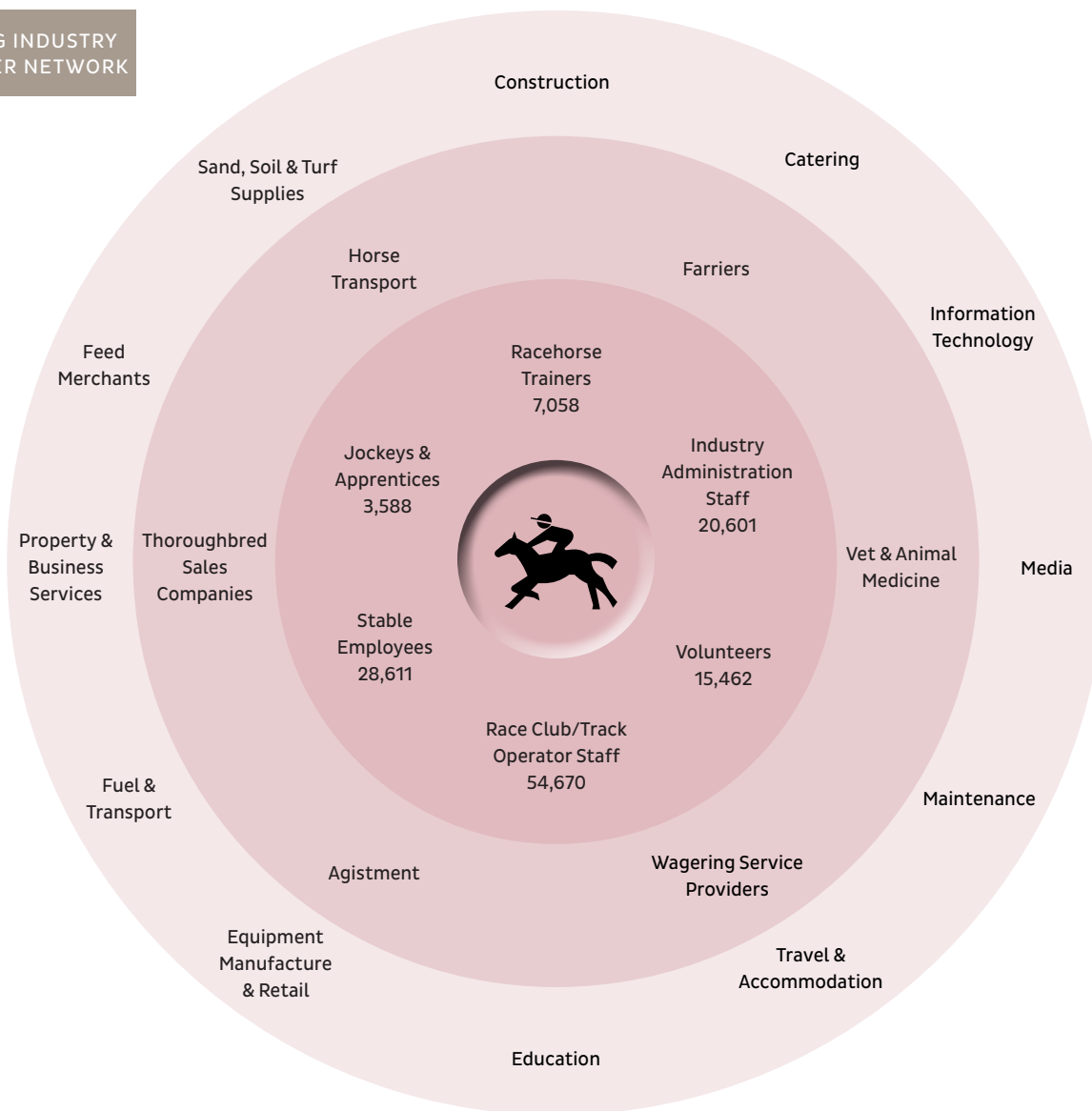
Racing requires a highly specialised workforce and the industry invests heavily in the development of its racing participants to ensure that the professionalism and integrity of the sport is maintained at the highest level. A diverse set of skilled participants including jockeys, trainers, breeders, and stable hands form a key part of a complex equine value chain. In addition, many businesses for whom thoroughbred racing provides the market for which to sell their goods or services also contribute to racing's economic ecosystem.

The key participants in the racing industry are outlined opposite:

| PARTICIPANT | ROLES | NUMBER |
|-------------------------------|--|----------|
| Breeders | + Own and maintain stallions and broodmares + Responsible for funding the production of foals for sale or to race | Unknown |
| Trainers | + Tasked with preparing thoroughbreds so that they are ready for racing | 7,058 |
| Owners | + Purchase thoroughbreds (from breeders, trainers and/or other owners) for racing + Engage trainers to prepare their thoroughbreds for racing | 149,827 |
| Jockeys | + Licensed to ride racehorses in races and in training where required + Includes Apprentices | 3,588 |
| Stable Employees | + Licensed support staff for trainers including strappers, trackwork riders and other stable employees | 28,611 |
| Race Club Staff | + Full time, part time and casual employees of racing clubs + Includes raceday and non-raceday employees | 54,670 |
| Peak Racing Association Staff | + Employees of peak racing associations/controlling bodies + Includes wagering staff in jurisdictions where wagering is controlled by the Peak Racing Association | 20,601 |
| Volunteers | + Raceday volunteers who assist with the delivery of race meetings + Volunteers who assist trainers or breeders in their stables | 15,462 |
| TOTAL | | 279,817* |

* The number of participants in racing is likely to be higher than this amount due to the number of thoroughbred breeders being unknown

RACING INDUSTRY SUPPLIER NETWORK



The thoroughbred racing industry stimulates employment across various levels of the broader economy. Directly within the industry, it is estimated that there are more than 279,800 individuals who are involved as a licensed participant, employee or volunteer. However, the impacts grow exponentially, when considering the businesses that provide services directly to the industry (often referred to as first-round impacts) and the activity that they stimulate further down-the-line.

“IN TOTAL, THERE ARE MORE THAN 279,800 INDIVIDUALS WHO PARTICIPATE IN THE THOROUGHBRED RACING INDUSTRY AS A PARTICIPANT, EMPLOYEE OR VOLUNTEER ”

EMPLOYMENT GENERATED BY THE THOROUGHBRED RACING INDUSTRY

JOBS SUPPORTED

In 2018/19, the demand generated by the thoroughbred racing industry across ARF member jurisdictions was responsible for sustaining 570,546 jobs. The impact of this created demand generates both direct and induced employment impacts as outlined below: -

The demand generated by the thoroughbred racing industry is directly responsible for supporting more than 301,661 jobs. This employment impact is tied to a functioning and active racing industry – the growth or decline in racing activity is likely to have a direct impact on employment levels amongst this population.

When the flow-on (induced) impacts of this created demand are also considered, total employment rises to 570,546. Employment in

this sector includes both production induced effects (i.e. employment opportunities in the supply chain of production) as well as the jobs linked to consumption induced effects (when workers spend their wages and salaries – earned as a result of racing industry activity – back into the economy).

HOUSEHOLD INCOME

Thoroughbred racing generates extensive employment and therefore significant household income. The jobs that are directly sustained by thoroughbred racing created demand resulted in more than US\$6.9 billion in wages and salaries. This represents the household incomes for those employed directly by the thoroughbred racing industry, or by those businesses who supply goods and services directly to the industry. Additionally, those employed as a result of the induced

demand created are beneficiaries of more than US\$7.6 billion in household income.

Therefore, the total household income generated, as a result of thoroughbred racing industry created demand, is US\$14.5 billion. When assessing the employment numbers in each country, it is important to note the differences in average wages for those employed directly within or in supplier sectors.

It is important to note that there is significant disparity on the relative wage rates from country to country (and from sector to sector). This means that the 'rate of employment' in some countries may be disproportionately higher or lower (based on created demand) because of the relative differences in wages from country to country.

EMPLOYMENT SUSTAINED BY RACING



**DIRECT & FIRST ROUND
EMPLOYMENT**

301,661



**INDUCED
EMPLOYMENT**

268,885



**TOTAL EMPLOYMENT SUSTAINED
BY THOROUGHBRED RACING**

570,546



Image Credit: Dubai Racing Club // Neville Hopwood.

BROADER SOCIETAL IMPACTS

The thoroughbred racing industry also generates significant impacts for the societies in which it operates. This occurs through two key areas: charitable activities and taxation revenues.

CHARITABLE ACTIVITIES

In 2018/19, thoroughbred racing in the Asian Racing Federation member jurisdictions was responsible for delivering charitable contributions in excess of US\$834 million. These charitable contributions play an important role in fostering societal benefits and impacts for the benefit of the broader population. The following case study illustrates one example of this impact.

CASE STUDY: THE HONG KONG JOCKEY CLUB – Riding High Together

The Hong Kong Jockey Club (the Club) has had a long tradition of providing support and assistance to charitable causes – an important activity which has been formalised as an integral part of the Club's operation since the 1950s, whereby the Club devotes its surplus after tax each year to charity and community projects.

Over the past decade, the Club has donated on average HK\$3.4 billion (US\$437 million) a year through its Charities Trust (the Trust) to the broader community. In 2018/19, the Club donated 95% of its annual operating surplus after tax to the Trust. Over the same period,

the Trust approved a record HK\$4.3 billion (US\$552.7 million) in donations to a record 294 projects. The Trust is one of the world's top ten charity donors.

Over the past five years, the Trust has placed particular focus on four strategic areas which are youth; the elderly; sports; and arts, culture and heritage, with approximately half of the Trust's annual donations allocated to these strategic areas.

*“AS ONE OF THE
WORLD’S TOP TEN
CHARITY DONORS, THE
HONG KONG JOCKEY
CLUB DONATED HK\$4.3
BILLION (US\$552.7
MILLION) TO NEARLY
300 CHARITY AND
COMMUNITY PROJECTS
IN 2019”*





SELECTED EXAMPLES OF THE HONG KONG JOCKEY CLUB CHARITY PROJECTS

Youth

More than 50% of Hong Kong secondary schools have joined the CLAP for Youth@JC initiative which aims to support young people make informed choices through the development of a career and life development intervention model.

Sports

Recognising the importance of exercise for health and wellbeing, and that habits of exercise are best formed at an early age, Fun to Move@JC aims to introduce fun and engaging activities as a supplement to regular physical education classes for over 30,000 children and 30,000 parents.

The Elderly

With Hong Kong's population rapidly ageing, the Jockey Club Age-Friendly City Project has developed an AgeWatch Index to monitor the social and economic well-being of older people. Baseline assessments have been carried out in all 18 districts, with three year action plans on age-friendliness for each district developed.

Arts, Culture and Heritage

The Central Police Station Revitalisation Project, led by the Club in partnership with the Government of Hong Kong SAR, is an initiative to conserve and revitalise an important heritage site comprising three declared monuments. The aim is to transform the site into a culture and leisure destination where heritage, contemporary art, performance arts and lifestyle elements are integrated for all to enjoy.

Operated under the name of Tai Kwun – Centre for Heritage and Arts, the revitalised site has attracted over 3.4 million visits in its first year of operation, becoming the most visited heritage site in Hong Kong.



Jockey Club Age-friendly City Project



Tai Kwun – Centre for Heritage and Arts
Image Credit: The Hong Kong Jockey Club

INTERNATIONALISATION OF RACING

Major international races and carnivals in ARF jurisdictions draw competitors and fans from across the globe, driving international engagement with the sport and promoting substantial direct and indirect economic benefits for the hosts and their home countries. With around half of the world's top 100 races held by ARF members, the region sets an extremely high standard for international racing.

Top international racing events hosted by ARF members, such as the Dubai World Cup, the Hong Kong International Races, the Japan Cup, The Championships in New South Wales, and the Victorian Spring Racing Carnival offer some of the most attractive prize money in the world. In 2018, the Hong Kong International Races had prize money of US\$12 million, the 2018 Japan Cup had a purse of US\$5.8 million, and the 2018 Victorian Spring Racing Carnival had prize money equaling US\$59.2 million, spread over eleven weeks, whilst in 2019, the Dubai World Cup had prize money totaling US\$12 million and The Championships had total prizemoney of approximately US\$14.9 million.

Pitting the best against the best is the apex for every major sport. It provides premium sporting entertainment to a global fan base. It drives excellence. Racing is no different.

Japan exemplifies a major ARF jurisdiction which has achieved excellence in breeding and racing, and has developed a dominant international presence. Due to Japan's high-quality breeding industry, proven training methods and an appetite to take on the world's best equine athletes, racing fans have enjoyed witnessing Japanese horses compete and triumph on the global stage. In 1998, Seeking the Pearl (USA) won the Prix Maurice de Gheest, the first European G1 race winner of a Japanese-trained horse. In 2014, Just a Way (Japan), who won the Dubai Duty Free in 2014, earned a rating of 130 and became the first Japanese horse to be honoured as the Longines World's Best Racehorse in a year. Between 2013 and 2019, Japan has had 253 overseas runners for 23 Group One victories. In 2019 alone, Japan had 50 overseas runners, with eight winning Group One races in Australia, Hong Kong, United Arab of Emirates and the United Kingdom. The capacity of Japanese-bred and trained horses to compete successfully around the globe speaks volumes for the quality of the world-class breeding and training standards in Japan.

In recent times, the internationalisation of racing has been supported by enhanced simulcasting of international races. This has enabled our sport to reach and engage a larger audience than ever before.

Commingling is fundamental to the success of racing as it offers the opportunity for a global fan base to wager on these major international events via a regulated channel with a high value proposition for customers. It is estimated that international commingling accounts for around 15 to 20% of total global turnover on racing and this number is anticipated to continue growing. Working to unlock the potential of commingling, during the Royal Ascot meeting in June 2019, the Hong Kong Jockey Club, in partnership with Ascot and Totepool, created the first pari-mutuel-based World Pool in which overseas wagering from Australia, Canada, New Zealand, Europe, the UK and the USA were commingled into Hong Kong's pools directly or via Totepool to ensure maximum liquidity for a growing international audience. Not only did it result in a significant turnover increase of over 60% compared to the corresponding day in 2018, it highlighted the benefits of having a commingling hub with deep liquidity in the pool and advanced technology.

The internationalisation of racing also helps to boost the quality of the sport domestically. Through the promotion of events like the Korea Cup, an international race established in 2016, the Korea Racing Authority (KRA) has successfully advanced the international renown of the Korean horse racing industry. Through a more globalised approach to racing,

Korea continues to diversify its industry from one focused largely on wagering to one with a growing breeding industry. Two decades ago, the KRA began investing in high-quality international stallions, mainly from the United States, which it imported to stand at stud in Korea. By procuring top international stallions to stand at stud in Korea at the turn of the 21st century, the KRA laid the foundations for enhancing the quality and global competitiveness of Korean racing. In March 2019, the Korean-based galloper Dolkong won at the Listed Curlin Handicap in Dubai, and earned the ticket to participate in the Dubai World Cup 2019. In November 2019, the first Korea-trainer runner, Blue Chipper, came third in the Breeders' Cup Dirt Mile (Grade 1).

The ease of travel for participants and horses has enabled jockeys, trainers and horses from across ARF member jurisdictions to dominate in the international racing arena. For example, in 2019, the Japanese mare Deirdre made history when she beat fierce international competition to win the Group 1 Nassau Stakes at Goodwood for trainer Mitsuru Hashida.

The internationalisation of the sport of horse racing has been fundamental to its growth in ARF member jurisdictions in recent decades, and will continue to play a central role in the long-term sustainability of the sport.



2018 Japan Cup.
Image Credit: Japan Racing Association.

JOCKEY CLUB OF TURKEY EQUINE THERAPY PROGRAM - CHANGING LIVES ONE RIDE AT A TIME

Equine-Assisted Therapy Centres (Hippotherapy), is one of the most important social responsibility projects of the Jockey Club of Turkey. These Therapy Centres are implemented as a therapy method to support the treatment of children with disabilities.

The first Centre was opened in Istanbul in 2015 and then followed by the Centres in Diyarbakır, İzmir, Bursa, Şanlıurfa, Adana and Elazığ Racecourses. Specially trained horses are used during the therapeutic sessions and accompanied by specialist physiotherapists. The purpose of these therapeutic sessions is to assist the development of children with physical disabilities or mental and emotional disorders.

Equine-Assisted Therapies are available for all disabled children holding a doctor's report confirming that the child may attend the therapeutic sessions.

The therapy sessions are used as a supportive method that combines the unique movement of the horses with the techniques of specialist therapists.

The therapy centres aim to boost psycho-social development, physical functions, skills and self-confidence of children with disabilities and to assist with their adaptation to daily life, away from the traditional hospital environment, with methods that utilise the healing properties of horses out in the relaxing atmosphere of nature.

During the sessions, children with various disabilities are not necessarily required to ride horses. Activities like grooming the horses, petting and feeding them are also included within the therapy. Riders who are specialised in horse care also accompany the sessions in

order to prevent horse-related accidents. Equine-Assisted Therapy Centres are located in 7 racecourses and operate 3 days a week serving free of charge, on an appointment basis.

Since its inception in 2015, the project reached 4,972 disabled children through 68,463 therapeutic rides.





Turffontein Racecourse
Image Credit: Racing. It's a Rush

NEW ZEALAND RACING INDUSTRY - STRONG FEMALE LEADS

Thoroughbred racing is one of the most inclusive of social pursuits in the world. Horseracing is one of very few sports where females and males compete equally alongside each other.

Bringing together people from all walks of life, involvement is often multi-generational and embraced by different cultural and social groups.

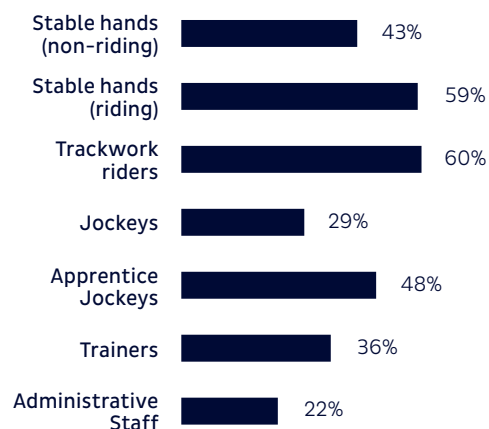
With three of its last five Prime Ministers women, the New Zealand racing industry has a similar story to tell. The 2019-20 New Zealand premiership season ended with five female jockeys in the top 10. Lisa Allpress took out her fourth premiership, with former premiership winner, Samantha Collett finishing third.

Wind back to 50 years ago, New Zealand held its first ever horse race for women called the Powder Puff Derby with 11 riders. A young Linda Jones from Paeroa participated and would go on to become the first woman in Australasia, the United Kingdom, Europe or North America to ride a Derby winner and the first woman in racing to be awarded the MBE

for her achievements in the sport.

Today, female participation in many aspects of the New Zealand racing industry is well established. Women represent close to 45% of the spectrum of participant roles across the entire racing industry.

FEMALE PARTICIPATION IN THE NEW ZEALAND RACING INDUSTRY



Lisa Latta is one of NZ's top trainers having won over NZ\$20m (US\$13m) with 972 career wins. Lisa was also the first solo woman trainer in New Zealand to claim the Trainers Premiership.

Topping the list is trackwork riders with the highest level of female participation at 60% followed closely by stable hands (riding) at 59% and stable hands (non-riding) at 43%. The New Zealand trainers' cohort has 36% female participation often working in partnership with family. At the end of March 2020, there were three females in the top 10 – one as part of a husband/wife combination; another a daughter/father; and the third trains in partnership with her grandfather and his wife. Female jockeys represent close to 30% of the jockeys ranks and have achieved great success since taking on their male counterparts more than forty years ago. They are blazing a path on the international circuit.

The strength of women pursuing a career as a jockey will continue strongly in future years with 48% of apprentice jockeys being female. In the area of administration, women are less well represented. Based on a sample of five leading Clubs, females occupied just 22% of board positions. However, with a strong base of female participation throughout all levels of the industry, there is no doubt that this will shift in the near future.



Lisa Allpress, four time NZ premiership winning jockey made history in March 2020 when she became the first female jockey to win a race in Saudi Arabia. Competing against some of the best jockeys in the world, she went on to finish second in the competition.



Victoria Carter ONZM served as Deputy Chair of NZ Thoroughbred Racing and a former director for 9 years of the Auckland Racing Club. She is also a member of the Asian Racing Federation and representative on the IFHA.

MAJOR BREEDING JURISDICTIONS IN THE ASIAN RACING FEDERATION

The breeding sector is responsible for producing thoroughbreds that compete in race meetings. Breeders mix their involvement between producing foals for sale and producing foals that are involved in racing. One of the challenges related to determining the 'size' of the breeder population is that the sector is split into 'hands-on' breeders (those who are actively employed in the task of breeding thoroughbreds) and 'hands-off' breeders (those who provide the investment in the breeding industry but have no role in the actual activity itself).

Breeders derive the majority of their income from the public and private sale of their stock, as well as through service fees. Some breeders

also derive revenue from their involvement in racing horses that they have bred and retained some, or all, of the ownership in.

A strong breeding sector also has significant scope to generate economic impacts through export sales. The potential returns are further enhanced by the shuttling of world-class stallions to other markets – the service fees from which result in economic benefits for the state/country of origin.

Thoroughbred breeding activity, related to the production of foals, is responsible for generating more than US\$1.6 billion across Asian Racing Federation jurisdictions. Essentially, breeders incur costs on the

maintenance of broodmares, stallions, yearlings, weanlings and foals in the following areas:

- + feed
- + veterinarian, worming and supplements
- + travel and transport
- + infrastructure and maintenance
- + stabling
- + cleaning
- + yearling preparation and sales costs

In some instances, breeders incur all of these expenses themselves, whilst in other situations, breeders may send their horses to professional service providers.

KEY BREEDING STATISTICS



FOALS

28,580



STALLIONS

1,109



BROODMARES COVERED

43,862

*Note: This study only includes an analysis of the breeding industry in Australia, India, Japan, Korea, New Zealand and South Africa



*“IN 2018/19, THOROUGHBRED
BREEDERS SPENT US\$1.6
BILLION ON BREEDING RELATED
ACTIVITIES”*



South Korean stallion Hansen, Jeju
Image Credit: Korea Racing Authority



NUMBER OF FOALS

OWNERSHIP & TRAINING

Owners play a significant role in the funding model of the racing industry. They provide much of the capital outlay and day-to-day funding for the preparation of racehorses.

In 2018/19, there were more than 149,800 individuals with an ownership interest in a thoroughbred racehorse across Asian Racing Federation jurisdictions. These owners competed for just over US\$2.1 billion in prizemoney throughout the year.

Research over a number of years has shown that many owners do not consider their involvement to be a financial investment from

which they expect a net positive return. This is not to say however, that owners are prepared to continue to fund their involvement if there are diminished opportunities to realise a return.

In 2018/19, thoroughbred owners spent more than US\$2.5 billion on the preparation of their thoroughbreds for racing.

This spending funded the preparation of more than 83,200 racehorses in training across the Federation, with the support of 7,058 thoroughbred trainers.

Essentially, owners incur costs on the preparation of their racehorses in the following areas

- + feed
- + veterinarian, worming and supplements
- + travel and transport
- + training fee
- + stabling
- + cleaning
- + gear and equipment

KEY RACEHORSE STATISTICS



**HORSES IN
TRAINING**

83,237



**STABLE
EMPLOYEES**

28,611



**PRIZEMONEY
ON OFFER**

US\$2.1 BILLION



**HORSE
TRAINERS**

7,058



**RACEHORSE
OWNERS**

149,827



Racing Minister the Rt Hon Winston Peters celebrates with the connections of New Zealand Bloodstock Karaka Million 2YO winner Cool Aza Beel.
Image Credit: New Zealand Thoroughbred Racing

RACING CLUBS & OPERATORS

The structure of racing clubs/operators varies across Asian Racing Federation jurisdictions. In some jurisdictions, racing clubs are membership based organisations who hold race meetings and events. In others, they are fully integrated businesses that include non-racing activities such as retail, accommodation and hospitality.

There are some racing clubs that also double as the Peak Racing Association in their jurisdiction – meaning that they not only oversee the racing activity, but also integrity, marketing, and wagering etc.

Overall, there are 532 racing clubs/operators racing at 504 race tracks throughout Asian Racing Federation jurisdictions. In 2018/19, these racing clubs were responsible for hosting 6,799 race meetings. In addition to hosting race meetings, a number of racing clubs also hold trials for the purposes of providing opportunities for racehorses to prepare under race-like conditions. Additionally, a number of tracks also operate as training tracks where trainers can take their horses in preparation for racing.

Thoroughbred racing clubs ran more than 55,800 races at 6,799 race meetings across the 2018/19 racing season. This equates to

just over 130 race meetings per week across Asian Racing Federation jurisdictions. Race meetings not only provide the opportunity for participants to race their horses, they also provide an important social destination for racing enthusiasts and are an important part of the social fabric of the community. It is estimated that thoroughbred race meetings in 2018/19 attracted more than 33.6 million attendances.

In 2018/19, racing and wagering activities were responsible for the generation of more than US\$15.2 billion in expenditure. This expenditure is made up of the following elements:

- + Racing customer spending on raceday and non-raceday racing club products
- + Product fee payments made by wagering service providers to principal racing authorities
- + Wagering taxes paid by wagering service providers
- + Operational expenditure incurred by wagering service providers
- + Racing customer spending off-track related to their attendance at the races
- + Other non-wagering related revenues generated by principal racing authorities and racing clubs.



**RACING CLUBS/
OPERATORS**

532



**RACE
MEETINGS**

6,799



ATTENDANCES

33.6 MILLION



RACECOURSES

504



RACES

55,839



Happy Wednesday
Image Credit: The Hong Kong Jockey Club



140 Tokyo Racecourse
Image Credit: Japan Racing Association

JAPAN RACING ASSOCIATION SUPPORTING COMMUNITIES

Since its inception in 1954, the Japan Racing Association (JRA) has been contributing a significant portion of its wagering turnover and profits to its Government's National Treasury, with three-quarters of the amount collected used to promote livestock development, and the remaining used to support social welfare.

Over the past decades, the JRA has contributed in excess of US\$125.1 billion to promote livestock development and to support social welfare. In addition, JRA directly supports projects which aim to generate positive impacts to the community and the industry.

LIVESTOCK DEVELOPMENT PROMOTION INITIATIVES

With the promotion of livestock development as one of its objectives, JRA financially supports individual projects. Every year, the JRA organises an open call for innovative and impactful projects with the theme for each year formulated based on the conditions and needs of the prevailing times. To date, the JRA has supported projects such as livestock restoration in disaster-prone areas, and prevention and mitigation of livestock disease.

SOCIAL WELFARE INITIATIVES

Complementing its existing contributions to its Government's National Treasury, the JRA also initiates and directs other community projects. An example is through its National Horse Racing Welfare Foundation, which devotes a portion of the prizemoney allocated to horse owners as funds to provide financial support to social welfare projects across Japan.

COMMUNITY INITIATIVES

Recognising the importance of creating an environment in which local communities can thrive, the JRA contributes to projects that aim to support the communities around its racecourses, off-course betting facilities, and training centres. Supported projects include the maintenance of roads and sidewalks, parks and schools in relevant neighborhoods.

ENVIRONMENTAL INITIATIVES

The JRA is committed to minimising the environmental impacts of its operations and has implemented a number of initiatives aimed at reducing waste sent to landfill and optimizing energy consumption.

In reducing waste sent to landfill, the JRA has conducted waste recycling activities under the name JRA RAP (Recycle Action Program) since 1998. Under JRA - RAP, the JRA aims to recycle

over 90% of the annual waste generated by JRA business activities.

In optimising its energy consumption, the JRA proactively promotes energy efficiency in the workplace and in its operations, and installs energy-efficient systems such as solar power systems at its major racecourses in the wake of the Great East Japan Earthquake in 2011. The JRA has reduced its energy consumption by 24% in 2018 as compared to 2010.





Let's Run



HKG



USA



JPN



FRA

Korea Autumn Racing Carnival
Korea Racing Authority
일자 : 9.6(목) ~ 9.9(일)
장소 : 잠실운동장 서울



KOR



IRE



GBR



SIN



UAE

Happy Ville

해피빌

= 건전한 경마문화는 당신의 품격입니다 =
경찰청 합동 불법경마 집중단속 실시(~10.30)
한국마사회 경찰청

Korea Cup 2018
Image Credit: Korea Racing Authority

APPENDIX

ABOUT IER

IER is a leading strategic consulting business specialising in the tourism, events and entertainment industries. For over twenty years, IER has provided economic impact evaluations for both private and Government clients. In particular, IER has specialised in consulting on a variety of projects related to the racing industries in Australia and New Zealand over this time.

This study constitutes an economic and social impact evaluation of thoroughbred racing in the Asian Racing Federation jurisdictions. It has been developed utilising the following source data:

- + Current year registration data relating to participants and animals
- + Data on breeding activity in six key jurisdictions, pertaining to the maintenance of stallions and broodmares and their foals and service fee revenues
- + Racing club data from 16 of the 27 racing jurisdictions, provided by way of a self-completion survey
- + Desk research used to assist in the development of estimates for aspects of the modelling that was not available

IER's deep understanding of the racing industry has been built on more than two decades of consulting to the racing industry (all three codes). Over the last few years, IER has prepared similar size and scope studies for:

- + South Australian Racing Industry (3 Codes)
- + Queensland Racing Industry (3 Codes)
- + Thoroughbred Racing Industry in Country Victoria
- + Northern Territory Thoroughbred Racing Industry
- + Standardbred and Thoroughbred Racing in British Columbia
- + Australian Harness Racing Industry
- + New Zealand Racing Industry (3 Codes)
- + Western Australian Racing Industry (3 Codes)
- + Victorian Racing Industry (3 Codes)
- + Australasian Greyhound Racing Industry
- + Australian Football League

The economic modelling for this study was undertaken by Associate Professor Barry Burgan (B Ec (Hons), FINSIA (Fellow). Barry is a director of Economic Research Consultants Pty Ltd and has extensive experience in the area of economic and financial assessment and policy advice. He has a background in the public and private sectors, academia and has worked on various projects in the area of economic policy, including in the area of economic modelling.

In particular, Barry has extensive experience in the use of both computable general equilibrium and input-output models, regional economic development and cost/benefit analysis. He has undertaken a number of these studies and projects with the

Sustainable Tourism Cooperative Research Centre. Barry has developed economic models for measuring racing industry impact in all jurisdiction of Australia and New Zealand, as well as the model which was used to develop the impacts outlined in this study.

DISCLAIMER

This report illustrates the impacts generated by thoroughbred racing in the Asian Racing Federation jurisdictions. It is important to note that it constitutes an analysis based on a mixture of actual data (provided by principal racing authorities and racing related organisations) and estimates. Some jurisdictions provided all requested data, some provided part of the data request, whilst some did not provide any data. In total, 16 of the 27 member jurisdictions provided data and have therefore been included in this assessment.

IER has not audited this data and has accepted it in good faith. All modelling has been undertaken to deliver the best possible approximation of each jurisdiction's size and scope.

LIMITATIONS OF THE STUDY

The development of systems to capture and track key data points across the Federation is central to the ongoing ability to measure and track the industry size and scale over time. At a minimum, it is important to have visibility over typical daily training costs, breeding activity and horse numbers, race club operations budgets, attendances and net wagering

revenues. With this data unavailable for some jurisdictions, it was necessary to develop complex modelling aimed at developing an approximation of these impacts. Additionally, 11 jurisdictions did not provide any data at all and have therefore been excluded from the analysis.

ECONOMIC METHODOLOGY

The purpose of this study is to measure the contribution made by the thoroughbred racing industry towards the economy Country. In this way, it is a generalised measure of the industry's contribution to each State/territory economy. Additionally, impacts have been aggregated to present a generalised national impact figure.

DETERMINING THE DEMAND CREATED

In order to determine the demand created, a model of the expenditure generated by racing industry activity was built. This model determines the level of economic activity that is generated as a result of the racing industry's operation.

The racing industry is defined as being the breeding, training and racing activities that occur. Wagering is included, insofar as it is a key finding source for many jurisdictions. The expenditures are then further disaggregated into industry sectors to better enable modelling of their flow-through impact within the economy.

ADJUSTMENT OF EXPENDITURES

The aggregated expenditure data is converted from purchasers' prices to basic prices, as the raw data include margins, taxes and subsidies. All monetary values in the input-output models are expressed as basic values.

The prime differences between purchaser prices and basic values are that:

- + basic values exclude the cost of transport and wholesale and retail trade embedded in the purchase price (and allocate these to the transport and trade sectors).
- + GST will be allocated to Gross Operating Surplus

In order to model the impacts in each jurisdictions, IER sourced input-output tables for 11 of the 16 regions from OECD. For the regions without tables a "similar" region was used as a proxy. The input-output tables were for the 2015 year and at a 36 sector level. They were not, in all cases, ideally created for use in a study of an industry such as thoroughbred racing, (i.e. arts, culture, recreation and sport, gambling, accommodation and food services were combined) however a level of restructuring was undertaken to make them more relevant.

The 2015 input-output tables were adjusted to 2019 based on exchange rate shifts per country. Exchange rate shifts from the period 2015-2019 would be the main driver of a need to update tables. Exchange rates were assessed and the tables were adjusted

accordingly due to the exchange rate shifts. In the majority of cases this reflected only small variations over time and was cross checked against other data in US dollars for 2019 – such as average wages.

IER sourced employment stats from the OECD and from the International Labour Office. They were mostly at the 20 sector level, so some assumptions were made to align them to the 36 sector level. In some countries, data was very aggregated so employment ratios were subject to some estimation in those cases.

ECONOMIC CONTRIBUTION

The economic contribution of an industry refers to the contribution that the industry makes in terms of:

- + gross state or regional product,
- + household income, and
- + the employment that these income measures support.

Industries do this in two ways – by the employment and activity it supports directly (and in the industries that depend on it as a customer); and the flow on effects which filters through the economy.

The importance of the expenditures generated by an industry in the production process is that they will sustain turnover in local industry, and specifically this will support local jobs and incomes. It is the jobs and incomes that are taken to be the measure of

economic impact or benefit (after netting out leaked expenditure on items such as imports). It is also generally acknowledged that, in addition to the jobs created for direct suppliers of services to the industry, the production expenditure also has a multiplier effect within the community. In this way, the direct expenditure impact of the racing industry generates a 'flow on impact' on other sectors through the expenditure of wages earned and through the direct purchases (from suppliers) made by the racing industry.

The use of multipliers, derived from input-output tables, has been a prominent process for translating directly created expenditure (a final demand stimulus) of industries or projects into jobs and incomes. The multipliers allow for the measurement of the extent of the flow-on impact generated in the economy, as a result of the racing industry expenditure. There has been some level of academic argument about appropriate models for converting increases in external expenditure (final demand) into regional economic impacts. The critics of using input-output tables often argue that multipliers are used to overstate the value of an industry – with the term multiplier taken as ratcheting up the value (or overstating the impact). This criticism used to be valid when analysts applied turnover multipliers but is not the case with the more appropriate use of value added multipliers – which translate the expenditure

estimates to a national accounting framework measure with a whole of economy context. Indeed, value added multipliers (the value added impact (direct and induced) relative to a dollar of created expenditure) are often less than one. Used correctly multipliers provide a more appropriate measure. In short, the use of these input-output based multipliers allow for reporting of the estimated outcomes of that industry in terms of:

- + the effect of expenditure or turnover on value added across a regional economy, and
- + its impact on the labour market in terms of job creation

These measures are consistent with many national accounting frameworks.

It should be emphasised that this methodology – of identifying the local expenditure associated with production by the industry and tracing the expenditure through the rest of the economy – cannot be interpreted as saying that Gross Domestic Product or employment would fall by this amount if the industry somehow did not exist. In the first instance local people would spend some or all of their money on other activities and the contribution of those other sectors would rise and replace some or all of that which was previously generated by the racing industry.

What this study calculates is the level of direct and induced employment and income that is linked to people choosing to spend their entertainment dollar on racing (after allowing for imports which are used in the production process). This could be considered as being the gross economic impact of the sector and is therefore a measure of its significance generally. If a similar gross impact was calculated for every other sector of the economy, then the sum of the impacts would be considerably greater than the size of the economy in total.

An alternative methodology would be to measure the net economic impact – which is the extent to which this industry expenditure is supported by revenues that can be considered new to the region. This would include the supply of services by the local industry to racing activities in other jurisdictions (i.e. serving a visiting Mare from another Country).

It would also focus only on spending by tourists or visitors to the region who attend the races rather than the stimulus created by spending by all attendees where it is associated with engagement with the racing industry. Whilst a valid approach, this particular approach (net economic impact) does not fit the purpose of this study. The methodology used in this report is consistent with that used in recent studies undertaken in various racing jurisdictions over the last decade.

POPULATION AND GDP PER CAPITA ANNUAL CHANGE

Unless provided by the individual jurisdiction, the population annual change was sourced for the United Nations Department of Economic and Social Affairs World Population Prospects 2019, Online Edition. Rev. 1 and GDP was sourced from OECD data which is in US dollars constant prices per head of population.

DEFINITIONS

- + Direct expenditure – is defined as expenditure associated with
 - + production (breeding related activities) of racehorses
 - + preparation (training related activities) of racehorses for racing
 - + net wagering revenues
 - + peak racing body and racing club/operator expenditure
 - + racing customer expenditure
- + Direct Value Added – represents the amount of income included in the direct in-scope expenditure, and therefore is the amount of wages and salaries plus gross operating surplus directly created in supply these services and product, which is also equal to the direct in-scope expenditure less the purchases the provider of the goods and services makes in providing the goods and services
- + Flow-on Impact – represents the value added activity generated to support the purchases made in providing the inputs

to the providers of the direct services, along with the value added impact in providing households with goods and services as they spend their wages, and the trickle on effect of this

- + Total Value Added – is the sum of the Direct Value Added plus the Flow-on Impact – therefore representing the contribution to Gross Domestic Product resulting from the events and activities of the thoroughbred racing industry in each jurisdiction
- + Employment – includes full-time, part-time or casual employment sustained as a result of racing industry activity
- + Household income – is defined as being wages and salaries (before tax) earned from employment generated in order to meet the demand (direct and induced) generated by thoroughbred racing industry
- + Participants in racing – is defined as being the number of employees (full time, part time and casual), participants and volunteers directly involved in the thoroughbred racing industry. Does not include down-the-line suppliers of goods and services
- + Input-output modelling – is the economic modelling used to determine the economic outputs within this study. It is an economy wide model, which shows the inter-linkages between industry sectors in the economy. Therefore, the change in economic

circumstances (specifically a change in final demand), for one sector of the economy can be traced though to its effect on other sectors.

IMAGE CREDITS

- China Horse Industry Association
- The Hong Kong Jockey Club
- Japan Racing Association
- Jockey Club of Turkey
- Korea Racing Authority
- Macau Jockey Club
- Mysore Race Club, Ltd.
- New Zealand Thoroughbred Racing
- Racing Australia
- Racing. It's a Rush.
- Racing Photos
- Singapore Turf Club
- Victoria Racing Club
- Western Racepix



Image Credit: Mysore Race Club, Ltd.

