

**Economic Impact
Report on the
New Zealand Sport
Horse Industry**

By

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Executive Summary

The aim of this research paper is to gain an understanding of the size and scope of the sport horse industry in New Zealand.

The definition of the sport horse industry is that it comprises of all horses in New Zealand that are not being used for the purpose of racing or breeding of horses for the purpose of racing. The actual size of this sector of the industry is not widely known, the best estimates are made by using the Agribase Biosecurity database, which states the numbers of horses in New Zealand at 120,000 with 40,000 of these being involved in the racing industry, leaving 80,000 to be classified as sport horses for the purpose of this research. The implications of using the Agribase Biosecurity database information is outlined later in this report.

The report firstly looks to define the industry and how it is separated from other industries; it also looks at what factors contribute to the makeup of the industry and how these factors are inter-related. The ability to look at comparable industries or in this case sporting pursuits is not possible due to the nature of the industry; with the exception of maybe pet care there is no other sporting or recreational activity that requires an ongoing cost to maintain the key component of that pursuit. Motor racing is used as an example in the report as a sport that has a high level of financial input required, however if you stop motor racing for 12 months you can eliminate all expenses during that period. This is not achievable with the sport horse industry; the only way to eliminate costs completely is to exit horse ownership.

To complete this report I looked at similar surveys and information from overseas studies, this information was used to help build suitable survey questions. This report contains highlights of the overseas studies to enable comparison to be made with the New Zealand study. The report also looks at some of the New Zealand research done on this industry sector and utilises some of the research findings when calculating economic benefits.

The information gathered for this research was through an online survey of horse owners, the survey purpose was to gather information about the amount of money that was spent on keeping a horse for one year in New Zealand. The survey looked at different areas in New Zealand to see if there were significant differences in the costs depending on location; it also looked at what price the respondent was willing to pay for a prospective mount.

Some of the key findings in the research are:

- Estimated 80,000 sport horses in New Zealand
- \$12,500 average total annual spend per horse
- Contributes over \$1 billion to the New Zealand economy annually, this is greater than 0.5% of GDP
- Directly sustains the equivalent of 12,000 full time equivalent (FTE's) jobs
- Sport horse owning land owners spent an additional \$5 billion on land purchases to support their interests
- Over 65% of horse owners are not willing to pay more than 25% of the ongoing annual operating costs on the purchase price of their horse.
- More than 70,000 horses in New Zealand will have a market value of under \$3,000

Based on this research it is recommended that further research be undertaken on the value of properties that are used for the sole purpose of equestrian pursuits within New Zealand. There is a move by some district councils to restrict the subdivision of land to what they determine to be economical farm units. The conversion of pastoral lands from production based to consumption based land uses is seen by some of these councils as moving to uneconomical units. This research suggests that the use of land for equestrian pursuits makes a far greater economical contribution than traditional farming practises could. Therefore the restriction in size of farming units is not justified, and in fact could have a negative effect on the economic development of the region.

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Research Aim

To conduct An Economic Impact Analysis of the Sport horse Industry in New Zealand

Introduction

This research aims to provide an indication of the contribution the sport horse industry makes to the New Zealand economy.

The research project will cover two basic points:

Firstly it will construct a definition of the sport horse industry, the aim is to establish the productive boundaries of the industry by mapping its component sectors and sub-sectors. This is important to establish first in order to conduct the second step.

Secondly it will seek to establish the economic value of the sport horse industry in New Zealand; this information will provide an understanding of the size of this industry in New Zealand and the contribution towards New Zealand's overall GDP.

The report will cover various aspects of the sport horse industry in order to achieve the two points covered above; it will then outline the survey questions asked in order to establish the economic values that it has used in the summary of results and conclusion.

A suitable methodology for sizing the horse industry in New Zealand

This section develops a suitable methodology for creating a baseline for the sport horse industry, given the nature of currently available data. The methodology is based on an adaption of the expenditure approach to economic sizing.

The value of economic activity is most commonly described by the calculation of Gross Domestic Product (GDP). It can be viewed in three ways: as the sum of the incomes derived from economic activity, which can be broadly divided between income from employment and incomes from profits; as a sum of expenditure, being that between consumption and adding to wealth (investment); or as a sum of the products of various industries of the nation. (Defra, 2004)

Gross domestic product (GDP) is New Zealand's official measure of economic growth.

There are three different approaches that can be taken to calculate GDP; the production approach, the expenditure approach, and the income approach. The two approaches used to calculate New Zealand's GDP on a quarterly basis are the production and expenditure approaches. The production approach is available quarterly on a chain-volume basis, while the expenditure approach is available on a chain-volume basis, and in current prices. Chain-volume estimates have the effect of price change (inflation) removed from them.

The production approach to GDP measures the total value of goods and services produced in New Zealand, after deducting the cost of goods and services used in the process of production. This is also known as the value-added approach.

The expenditure approach to GDP (also known as GDE) measures the final purchases of goods and services produced in the New Zealand domestic territory. Exports are added to domestic consumption, as they represent goods and services produced in New Zealand, while imports are subtracted. Imports represent goods and services produced by other economies.

Conceptually, both the production-based and expenditure-based GDP series should produce the same growth rates, because what is produced by an economy should equal what is used. However, as each series uses independent data and estimation techniques, some differences between the alternative measures arise. The expenditure-based series has historically shown more quarterly

volatility and is more likely to be subject to timing and valuation problems. For these reasons, the production-based measure is the preferred measure for quarter-on-quarter and annual changes.

(www.stats.govt.nz)

The methodology used to measure the size of the horse industry in New Zealand for this study is based on the expenditure approach to industry sizing. It is important to note that due to the inter-related nature of this industry it is important to avoid double-counting in this approach to sizing of the industry. Therefore it is important to classify consumption expenditure as either final or intermediate. An example of intermediate expenditure would be that of a farrier, they purchase horse shoes and nails from a retailer or wholesaler; then use those products when shoeing a final user's horse. If the measurement was based on figures from gross GST returns then the costs of the shoes and the nails would be tripled or possibly quadrupled, firstly by the importer, then wholesale or retail, then the farrier and finally the end user, providing the end user was GST registered. In many cases the farrier will deal with a mixture of registered and non-registered end users. If the measure was to use net GST figures, then exact figures would also be distorted by GST claims on non-equestrian expenditure, fuel stationary etc. The importer may import other non-equestrian products, the farrier may purchase from a non-specialist retailer like a rural merchant. The farrier may not fully declare their income from non-registered end users. Obtaining data from Inland Revenue specifically related to equestrian business activities is also flawed due to the non-classification of specific industry types within the equestrian industry.

To summarise, the survey data is based solely on the final user expenditure information. Whilst it is not the ideal approach to measure the complete contribution of the horse industry to the New Zealand economy, it does offer the best approach in these circumstances.

A clear definition of the sport horse industry

The definition of the sport horse industry for the purpose of this research can be defined as encompassing all activity that has the horse as its focus and activity that, in some reasonable capacity, caters for such an activity, with the exception of horses that are involved in racing or breeding specifically for racing whether it is standardbred or thoroughbred horses. New Zealand does not have a quarterhorse racing industry so their primary purpose in New Zealand is in the sport horse sector so they are included in this research.

The term sport horse covers all types and breeds of horses including ponies that are used in the pursuit of sporting endeavours, the sporting endeavours within this research covers from Olympic competition participation through to pony or miniature horse breeding operations that are there for the purpose of personal companionship and enjoyment. Some aspects of horse racing are included in this research; the development of the kids karts programme to encourage young participation in the harness racing industry is included in this research. The participation in this programme is very similar to participation in other riding school programmes however the focus is on harness racing and driving rather than riding. The ponies used in these programmes are also used for other purposes and therefore the separation of the two values would be impossible to establish.

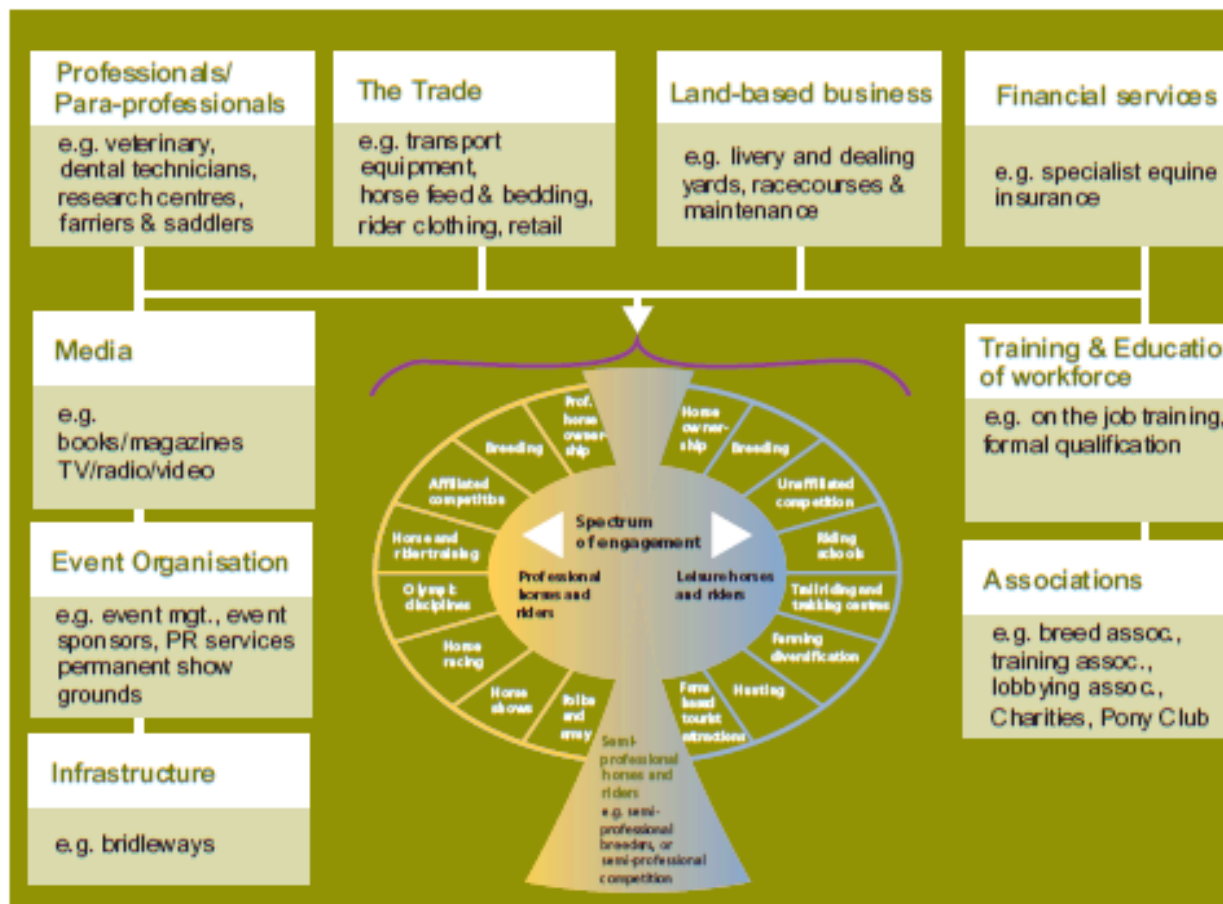
A clear definition of the industry core is required to establish the Gross Value Add (GVA) of an industry, as it must be possible to make distinctions between final output and intermediate consumption. Due to the complexities of the way the sport horse industry operates in practise and the problems of drawing neat boxes around industry sectors, establishing a clear distinction between the economic core of the industry and the upstream supplying units of the industry is challenging. The conceptual maps (Figures 1 and 2) define the industry core on the basis of activities within the horse industry; that is by avenues through which people can become engaged in the horse industry. For instance, they can take a horse riding lesson, go and watch dressage or show jumping at various levels and/or own a horse themselves.

This definition, with regard to an economic sizing exercise, does lead to a problem: the core, thus defined, would exclude the significant value added by upstream units such as farriery and veterinary services. (Defra, 2004)

Figure 1: Conceptual map of the industry core



Figure 2: Conceptual map of upstream categories of supply for the horse industry



The industry core

The industry core conceptual map has been centred round the nature of engagement from riders and participants. Generally, riders (and horses) participate in the horse industry on a variety of levels and, in simplistic terms, a rider's/participant's engagement can range from professional interest through to a more casual, leisure based interest. To that extent, participation in the horse industry can be placed along a spectrum of engagement from professional through to leisure. Riders/participant's whose participation in the industry represents their main source of income are at the professional end of the spectrum, at the other extreme are riders/participants and horses that are engaged in the industry on a pure leisure basis. In between these two extremities is a plethora of people with semi-professional interest, i.e. participants whose interest is split between generating income and leisure activity. (Defra, 2004) Labelling of the extremes as professional and leisure is not intended to imply that business that cater to the leisure sector are unprofessional, nor that full time participants are professional, it is just a definition of the nature of engagement by the horse and participant.

Within the industry in New Zealand the majority of racing stables would be classified at the professional end of the scale and a participant who hires a horse to go trekking once or twice a year would be at the extreme leisure end of the scale. This study looks at the expenditure of the end user; therefore by its nature the results do not aim to capture the expenditure of the professional equestrian establishments as they fall within the intermediate expenditure category. The measurement of those who fall under the semi-professional category is easier to measure; their expenditure on equestrian goods, services and related activities is captured whereby their income derived from equestrian activities is not captured. The income from the semi-professional will have a portion captured by the expenditure of the participant at the leisure end of the scale in some circumstances.

The sale and purchase of horses is also not included in the research, measurement of this data is hard to capture as there is no primary marketplace where the product is sold to establish a fair value for a specific product type. Unlike the racing industry which has a series of auctions every year as a primary focus for breeders to market and sell their products. The racing industry through trials and race day performances also helps to determine a relative pricing matrix for the product. The establishment of such markets have been established overseas within specific breed regions but has never eventuated here due to lack of interest and the relatively small number of buyers at any one time in the marketplace for a specific product type. The racing industry has one specific goal for the purchaser, for the horse to win a race; the sport horse industry buyer will have a number of different motivating factors when it comes to making a purchasing decision. The lifespan expectation of the sport horse buyer's purchase will also be much longer than for the racing counterpart. The product lifespan expectancy of the racing purchaser is typically 2 – 5 years, compared to the sport horse buyer who may have a usage range expectancy of between 1 and 20+ years. The shorter term for the buyer of a first pony for a child who is still growing and developing, they will purchase to meet the current needs of the child, the child would be expected to develop in skills and abilities fairly rapidly over the first year and therefore require a mount more suitable for helping them develop their capabilities and achieve performance goals. The purchase is not discarded however, it will be traded to a new owner who is at the start of their equestrian journey, the traded price can be very similar to the purchase price and this trade may occur on a number of occasions over a number of years with minimal net gain in value. The longer term purchaser may be someone who purchases a young horse with the aim of a competition career in the medium term then a breeding career after retirement from competition. The purchase price is also determined by a number of factors which will influence the decision making process and therefore effect the price, some of these indicators include factors such as purchaser's goals and desires, purchasers ability, purchasers budget and the

purchasers personal preferences. For the purchase of ponies it may also include parental influence and parental motivating factors beyond the intended riders motivating factors.

Number of Horses in New Zealand

The exact numbers of horses in New Zealand is not able to be clearly defined; the standard for measuring this number for this study has been to use the Agribase's Bio security Database. Based on their figures there are 120,000 horses in New Zealand, of which 40,000 are involved in the racing industry. This leaves 80,000 outside of the racing category which through my definition are considered to be sport horses. In New Zealand there is no formal requirement to register your horse with any particular organisation or industry sector. Unlike the dairy, sheep, deer and beef industries where there is a requirement through the bio securities act to record stock and stock movements, this is not required for the equestrian industry. This does pose a potential bio security risk should an outbreak of Equine Influenza become established in New Zealand like it did in Australia in 2007.

This method of defining the number of horses in New Zealand is the most accurate that is available, the split between the racing and sport horse is also a valuable tool. The same or similar methodology has been used in most overseas studies to conclude the number of horses in that country. Therefore the most accurate estimate of the number of sport horses in New Zealand is 80,000. The limitations with using the Agribase database figures is that the trigger point for land owners to be included in the Agribase survey is the filing of a GST return for an agricultural business. The majority of horse owners partake purely for enjoyment and are likely to fall outside of the GST catchment. The Agribase data will capture non land owning horse owners if they pay for grazing on a property that is captured under the GST catchment, it won't however capture those who fall outside all of their parameters.

Linkage between the racing industry and the sport horse industry in New Zealand

The racing industry makes a direct contribution of \$424 million to New Zealand's GDP (0.37% of total GDP), and it generates more than \$1,480 million (1.3% of GDP) if the indirect impact of expenditure in the racing industry is taken into account. More than 40,000 people are involved in some capacity in the racing industry 74% in the production of racing animals (breeding, training etc) and 26% in racing club, race day and TAB operations). The racing industry directly sustains 9,248 full-time equivalent (FTE) jobs, and when the indirect impact of racing on other industries is taken into

account, the total employment impact rises to 18,320 FTE jobs. –Briefing Paper (Department of Internal Affairs, 2005)

Although we have separated the industries for the purpose of this research, the two are intrinsically linked.

The racing industry is reliant on the sport horse industry in the following ways:

- For staff development and training, potential jockeys and stable staff develop their ability to ride and handle horses through riding schools and pony clubs. These participants are also likely to retain an interest in the sport horse sector throughout their career in the racing industry.
- As an aftermarket for the racing and breeding industry, horses that do not perform on the racetrack are more than likely to end up being used in the sport horse industry in some form.
- To establish a large professional market for service industries to operate in.

The sport horse industry is reliant on the racing industry in the following ways:

- For the establishment of a market of horses that have ended their racing career and are looking to move on to other uses.
- As a career pathway for individuals who want to be involved in the horse industry, the sport horse industry is very limited in the number of professional operations; the racing industry provides a larger number of paid employment opportunities.

The inclusion of upstream units such as farriery and veterinary services in the survey to measure expenditure within the sport horse industry would also prove difficult to separate income streams between the racing industry and the sport horse industry. For example the veterinarian industry, by the nature of their business would mean that income would most likely be derived from both the racing and sport horse industries. The split between the two would be dependent on the practise, then down to individuals within the practise. Although it would be possible to obtain an estimate from the practise manager as to their assessment of what percentage of income and expenditure would be attributed to each sector, the results would be an estimate only. The inclusion of upstream units may be considered in future studies.

Comparable Sports

The equestrian sport is difficult to replicate in any other industry that operates on personal discretionary income. If one was to compare equestrian sports with say motor racing, both sports have fairly high participation costs, they are both accessible at various levels depending on budgets, however it is possible to compete at the highest level in equestrian without the requirement to have a large operating budget in order to be competitive at that level. Motor racing on the other hand does require a significantly larger budget to compete at the higher levels than it does to compete at lower levels.

The difference with equestrian ownership is that there is an ongoing cost to operate when you are not competing or actively participating in the sport. The horse requires ongoing supervision and care, you cannot park it in the garage and leave it for six months until the season starts again as you can with a race car, bike, golf clubs or any other item of sporting equipment that you require to enable participation.

Other Countries

Limited information on the contribution of the equestrian industry is available from other countries; some of the information is based on a purely regional basis with other data sources covering the entire country. The differentiation between racing and sport horse participation is not always defined and all economic data released has combined all of the data into one report. As stated earlier in this report, the difficulty lies in the separation and differentiation between the sectors with the inter-relational reliance between both sectors.

Summary of Overseas Reports

Defra Report – British Equestrian Economy 2004

- Horse population – 600,000 – 975,000 (best estimates)
- Racehorses – 40,000 (included in total horse numbers)
- Gross Output - £3.4 billion (stated not robust)
- Direct employment - 50,000
- Total employment (including indirect) estimated 150,000 – 250,000
- 11 million consumers (23% of population) have some interest in the industry, this is a wide range of participants from those who ride to those who watch horse racing on TV
- 5 million consumers (11% population) have an active interest in the horse industry, excludes those who just watch on TV

- 2.4 million people in Britain ride

It is interesting to note a similar number of racehorses in Britain as in New Zealand. The set-up of the British equestrian sector shows a marked difference to that in New Zealand, the number of land owners as a percentage of horse owners is greatly reduced in the UK when compared to New Zealand. Due to this the riding school system is well established in the UK, this scenario has just started to evolve in New Zealand, with riding schools starting to be built near larger towns and cities in New Zealand.

The Defra report recommends that a large scale survey of the British equestrian industry take place to enable them to establish more refined data and industry sizing databases so that they can measure the size of the industry more accurately.

British Equestrian Economy Report 2006 Summary

- Number of horses in the UK 1.35 million
- Sporting horse ownership by sector
 - Racing 16,000
 - Horse Trials 7,800
 - Show Jumping 17,900
 - Dressage 6,400
 - Hunting 52,000
 - additional 169 000 horses used for hunting in addition to other activities
- Number of horse riders (People who have ridden at least once in the previous year) 4.3 million
- Number of equine passports issued 970,000
- Estimated overall annual worth of the industry £4 billion
- Money spent annually on buying horses £417 million
- Money spent annually on horses and riding generally £2.6 billion
- Riding lessons £732 million (35 million paid-for riding lessons annually)
- Economic impact of British racing £2.8 billion (Deloitte report for British Horse Racing Board "Economic Impact of British Racing" 2006)
- Horses per region of Britain
 - Scotland 94,500
 - N. East & Yorks 202,500

- North West 121,500
 - Wales / SWest 216,000
 - Midlands 256,500
 - Greater London 135,000
 - S.E / East Anglia 310,500
- Number of people who play polo (registered players 2006) 3,025 Hurlingham Polo Association

British Equestrian Economy Report 2011 Summary

The gross output of the equestrian sector is valued at £3.8 billion a year, lower than previously, but reflecting the shrinking consumer market caused by the economic downturn. It is still, however, an extremely large figure in its own right, boosted significantly when other equine-related activities such as racing (an estimated £3.7 billion) and major equestrian events (an estimated £6 million) are factored in.

- Three-and-a-half million people in Britain have ridden at least once during the year 2010-11. Although this is 19 per cent down since 2005-6, it is 1.1 million more than in 1998-9.*
- A drop to 1.6 million people riding once a month – but 14 per cent more than in 1998-9.
- Forty-two per cent of ex-riders – 1.3 million – said they planned to ride again in the future. Of those who had stopped riding, expense and time were cited as the main barriers.
- The number of riders is expected to increase as the economy improves and there is greater affordability. An overall growth in riding since 1998-9 brings a positive long-term outlook.
- There is increased interest in riding for pleasure, schooling, riding lessons, competition – both affiliated and non-affiliated – and hunting.
- Forty-eight per cent of regular riders are aged 24 and under, but significant growth has appeared among those aged 45 and over.
- There are an estimated 900,000 horses, owned by 451,000 private individuals – that's a drop of 300,000 since the 2005-6 survey. The figure, however, is exactly the same as in 1998-9, showing no overall decline in just over 10 years. When the 88,000 horses owned by the professional sector are added, the overall number of equines in Britain reaches almost a million.
- The average purchase value of a horse is £2,160, just £10 more than five years ago.

- It is estimated that direct expenditure for the upkeep and care of horses stands at £2.8 billion – £3,105 per horse, per annum – compared with £2.6 billion in 2005-6.
- Other costs involved in owning a horse are estimated at £557 million a year, including £191 million spent on footwear and £129 million on riding hats and body protectors.

* The variation between 2006 and 2011 estimates might be partly a result of margins of error in each survey. The actual number of people who have ridden in the past 12 months could be several per cent plus/minus the proportion shown in the survey, for example.

Irish Sport horse Industry

- €400 million estimate of the value of expenditure within the industry (excludes labour costs and purchase of horses)
- Net economic contribution - €573 million
- 110,000 horses in the Republic of Ireland
- Ratio of 1 FTE to 6.8 horses = 16,176 FTEs required in sport horse yards, if paid at minimum wage levels then the value of FTEs within the sport calculated to be €257,393,000 (this does not include ancillary service employment)

The Irish figures are based on their sport horse industry; this is the same as the research that is being undertaken in New Zealand.

United States of America

There are 9.2 million horses in the United States.

- 4.6 million Americans are involved in the industry as horse owners, service providers, employees and volunteers. Tens of millions more participate as spectators.
- 2 million people own horses.
- The horse industry has a direct economic effect on the U.S. of \$39 billion annually.
- The industry has a \$102 billion impact on the U.S. economy when the multiplier effect of spending by industry suppliers and employees is taken into account. Including off-site spending of spectators would result in an even higher figure.
- The industry directly provides 460,000 full-time equivalent (FTE) jobs.
- Spending by suppliers and employees generates additional jobs for a total employment impact of 1.4 million FTE jobs.
- The horse industry pays \$1.9 billion in taxes to all levels of government.

- Approximately 34% of horse owners have a household income of less than \$50,000 and 28% have an annual income of over \$100,000. 46% of horse owners have an income of between \$25,000 and \$75,000.
- Over 70% of horse owners live in communities of 50,000 or less.
- There are horses in every state. Forty-five states have at least 20,000 horses each.

Specifically, the number of horses by activity is:

Racing	-	844,531
Showing	-	2,718,954
Recreation	-	3,906,923
Other	-	1,752,439
Total	-	9,222,847

“Other” activities include farm and ranch work, rodeo, carriage horses, polo, police work, informal competitions, etc.

Figures are in USD

Canada

- The horse industry contributes more than \$19 billion annually to the Canadian economy
- On-farm activities with horses generate 76,000 full-time jobs, at an average salary rate of \$29,884
- Off-farm activities with horses (racing and competition) generate 9,806 full-time jobs at an average salary rate of \$25,478
- The Canadian horse industry supports more than 154,000 jobs in Canada – one full-time job for every 6.25 horses in Canada

Figure 3: Estimated equine population (Sport horse and Thoroughbred) for selected EU member states

Member State	Total Number	Inhabitants of '000	Horses per 1,000 persons
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Horses '000

EU	4,376	375,231	11.7
UK	965	58,800	16.4
Sweden	250	8,900	28.1
Belgium	200-250	10,200	22
Germany	1,000	82,200	12.2
France	1,000	59,100	16.9
Ireland	110	4,400	25
New Zealand	120	4,300	28

The data for this table was adapted from EU Equus (2001), the information for France and Ireland had been updated, the population figures for Ireland and New Zealand had been updated although the horse numbers for Ireland remained as stated; the horse number figure for Ireland is based on their sport horse population only.

Participation levels

Equestrian sports have a very wide range of participation age levels. Children will start to learn to ride from the age of two to three and then can still be participating in the sport in their nineties and sometimes past their one hundredth birthdays.

Equestrian sports are included in the modern Olympics; they are now the only sport that men and woman compete on equal terms against each other. Shooting used to have men compete against woman but the competition has now been divided. The range in age of competitive Olympians is also the greatest of any Olympic sport, with the youngest being 16 and the oldest 67 at the 2008 games. The oldest competitor again at the 2012 Olympics is set to be Hiroshi Hoketsu, who was 67 when he competed in 2008 and will be 71 when he competes in 2012. Hoketsu first competed at the Olympics in Tokyo in 1964; it will be 48 years since his first Olympic appearance, a feat no other sport can hope to emulate.

The on-going appeal and ability to stay competitively involved in a sport at the highest level for such a length of time is one of the attractions to the sport, the connection and companionship with the horse is another factor that other sports cannot duplicate.

Research into participation and Involvement levels

Sport and Recreation New Zealand (SPARC) surveys include regular horse riding participation, and casual participation. SPARC surveys estimate there are 23,000 regular horse riders, those who ride at least once in every 2-4 weeks, in the Auckland Region (SPARC, 2003). Casual equestrian participation, those who have participated at least once in the past 12 months, is estimated at 3% of young people Nationally (1% of boys, and 6% of girls), and 5% of adults (4% of men and 6% of women). The Auckland Region's casual participation rate is slightly higher than the national average at 6%. This means that 78,000 people may have taken part in some form of horse riding recreation at least once in the last 12 months based on current population figures (Statistics New Zealand, 2006).

Participation starts early and continues well into the over 50s age group (SPARC, 2007). It is common to find competitors in the 40+ age group still competing at all levels of the sport.

Horse riding has a high female participation rate at all ages, and is the third ranked sport for girls 5-17 years old. Women in their 30's and 40's take up riding for the first time, or return to it after having children. However, it is also an activity that many in their 20's must give up due to the time and money constraints on young adults as they leave home and start a career or family. While in most equestrian sports men and women compete against one another equally, some are favoured by one gender or another. For instance, the majority of the 973 rodeo cowboys (SPARC, 2006) are males, as are most polo players, but other disciplines are dominated by female competitors.

Disabled and paraplegic riders and drivers compete at many levels, including elite sports and therapeutic horse riding is a growing sector in all countries, including New Zealand.

COMPETITIVE SPORTS

Top-level competition where one might expect access to available funding and/or training facilities is a very small proportion of the rider numbers in the region. SPARC currently only funds Olympic sports – Dressage, Show Jumping and Eventing. Therefore, despite world rankings in both junior and elite levels, Endurance (racing over long distances) does not receive any financial support.

The New Zealand Equestrian Federation (NZEF) controls competitive riders in the traditional sports of Dressage, Eventing, Endurance, Show Jumping and Show Hunter. This level of equestrian sports has just 5,842 registered riders nationally, 1,035 of these are from the Auckland Region (Equestrian Sports NZ, 2007).

Competitive carriage driving has approximately 100 members spread throughout the country with nine clubs in the North Island and three in the South Island. (New Zealand Carriage Driving Society (Inc), 2007) The number of people involved in carriage driving for recreational purposes is estimated to be 3-4 times this figure. Kidz Kartz created by Harness Racing, is a programme for kids and ponies to compete in harness races and learn about horsemanship.

Polo provides economic benefit for the country through overseas pony sales, rider training schools and competition. There are 19 polo clubs throughout the country and 300 handicapped players. (New Zealand Polo Association) Club membership figures show polo with 455 registered members (SPARC, 2006). Polo players have a handicap system, somewhat similar to golf (except in polo the best players have the highest handicap)

Polocrosse has 18 clubs nationally (Polocrosse New Zealand) with 387 registered members (SPARC, 2006). Polocrosse is a cross between polo and lacrosse, aimed at being a more egalitarian game than polo; it only requires one horse per rider (as opposed to a team of horses for polo).

Endurance and Competitive Trail Riding (CTR) are the fastest growing equestrian sports. Horses and riders race over distances ranging from 10 to 160 km. "Have-a-go-days" with 10, 20 and 30km rides are very popular with recreational riders at Woodhill and Waiuku Forests.

Western horse sports are also gaining in popularity. These are based on the American tradition of cowboy attire, gear (saddles and bridles) and competition (cutting, reining, pleasure riding etc.).

New horse sports are being developed in response to modern riders' desire for a more multi-dimensional recreation than is offered by traditional horse sports. Examples include Le Trec a multi-discipline sport with elements of orienteering, dressage, cross-country and horsemanship, which is increasingly popular in Europe and Britain. Tie and Ride is a multi-discipline sport where runners and horse riders compete as a team and Competitive Mounted Orienteering is like a mounted treasure hunt. These new sports aim to get riders out into the environment, involve non-riders, and incorporate new skills.

Old sports are also being revived; New Zealanders are amongst the best jousters in the world. There are three jousting clubs in New Zealand at present, and world championships have been held in Lower Hutt on several occasions (Order of the Boar).

RIDING FOR RECREATION

Recreational riding is not just about time off from competition. Many recreational riders do not have competitive aspirations, but instead enjoy horse riding for the physical, social and emotional benefits it brings into their lives. There are an increasing number of independent riding clubs outside of the pony clubs system. These riders are often adults, who are more interested in having fun than competing. These clubs are as likely to organise a group trail ride, as a club show jumping day. Others still provide traditional competition, but in a more relaxed atmosphere. Waitemata Riding Club, one of the largest has approx. 230 members. (Waitemata Riding Club)

Horse riding is great physical therapy; the swinging, repetitive motion improves balance, coordination, strength and muscle tone while gently mobilizing the joints. It allows many to enjoy the outdoor environment in a way that would otherwise be denied them. New Zealand Riding for the Disabled (NZRDA) is an association of 53 Member Groups. They provide riding therapy for children and adults with are physically challenged with a wide variety of disabilities including cerebral palsy, spina bifida, paraplegia, multiple sclerosis, muscular dystrophy, traumatic brain injury, or stroke, learning disabilities or intellectual disabilities.

CARRIAGE DRIVING

Recreational driving has up to 3 times as many participants as competitive carriage driving. In addition to those who currently drive, there is also a potential for this form of recreation to increase quickly if given greater opportunities (places to drive). Miniature horses and ponies, as well as donkeys (and miniature donkeys) have increased due to the popularity of lifestyle blocks on the city fringes. Not suitable for riding, these animals are fun to drive.

The Kidz Kartz programme, while focussed on harness racing is also introducing many more children and ponies to the skills of driving. (Kidz Kartz) Having gained these skills it is reasonable to assume that some will wish to continue driving as a recreational activity, if there is the recreation space to do so. In addition to the able-bodied enthusiasts carriage driving provides opportunities for wheelchair bound people to enjoy the outdoors in a more self-sufficient way than perhaps any other recreational activity (Access Adventure).

Research Methods

The approach used to gather data for this research project was through quantitative research methods designed to gather sufficient data to enable relative analysis and interpretation from which reliable trends and patterns can be established.

The method used to gather the quantitative data was through a web based survey questionnaire.

The research aim is to gain an understanding of the size and scope of the sport horse industry in New Zealand. Research indicates that there are approximately 80,000 sport horses in New Zealand, the Horse and Pony survey of its 70,000 readers indicates that 41% of respondents owned 2-3 horses. This combined with the 25% that owned one horse gives a population of over 60% of horse owners with less than 3 horses. This would indicate that there are over 50,000 sport horse owners in New Zealand. The New Zealand Equestrian Federation has approximately 6,000 members, the New Zealand Pony Club Association has 5,000 riding members; there are participants who are members of both organisations. This leaves over 40,000 sport horse owners who are non- members of the two largest sport horse organisations in New Zealand.

Bias in sampling frames - The difficulty faced when obtaining a sampling frame for this research is how to contact the majority of participants who do not belong to one of the major sport horse organisations who have a detailed data base of their members and email contact details for a large percentage of those members. Sending out the survey request to the Federation and Pony Club membership only would result in a bias in the sampling frame by obtaining results from those who were more likely to be more active in the sport, more likely to spend more on their sport through increased costs associated with competitions and horse registrations, travel to competitions and the like. This would result in a bias towards a higher spend per horse than might have been expected for non- competitive participants.

The ability to survey the non -affiliated sport horse participants was crucial to avoid a bias in the survey results. Denscombe (2010) outlines various approaches to use when using internet surveys and sampling frames, his approach of using organisational lists for obtaining sampling frames comes up with the same issue that I have with the inability to gather non-affiliated participant's information through lack of contact details.

Random sampling through social media – In order to obtain a larger random sample of the entire population through cost effective means the lead researcher distributed the survey through social media channels. The networks the lead researcher was involved in are generally associated with the

competitive sport horse groups; through the New Zealand Horse Recreation group the lead researcher was able to expand this sample frame to include a larger majority of non- competitive participants, therefore giving the survey results a better representation of the population.

Measuring response rates – Standard survey techniques allow accurate measurement of survey response rates. If you send out 100 surveys and obtain 10 responses then you have a 10% response rate, you can then state whether this response rate is acceptable for the survey you sent out. When the survey request is sent through social media sites, the link is passed on from one person to a number of friends, some of whom may be part of the population you are sampling; they then pass the link onto their friends who again may have a proportion within the sample population. The non-population friends however may have other friends who are within the population and the link is spread wider. The measurement of response rates through this form of information spread is not possible to measure as you cannot ascertain the number of requests that had been sent, you cannot control the potential for duplication of requests or measure the amount of duplication.

In order to use the survey to meet the research aim a large enough number of responses needs to be obtained in order to measure the results with statistically significant data. Too few responses could result in data being skewed by one particular response. For this survey the data was filtered for responses that appeared to far from the mean to be justifiable. An example in this survey was under the paddock and pasture maintenance question, one response was \$60,000, this in relation to the amounts in the other survey answers from this respondent was out of line, it appears that they had made an input error, results like these were removed when calculating the results as they would have skewed the average cost figure significantly higher than should have been expected. The answer could have been correct, but when compared to the other responses for the same question may have been the result of capital expenditure and it would not be anticipated that the same costs would be associated with this expenses on an on-going basis for this participant. The ability to crosscheck these responses has given a greater accuracy in the final survey results.

Survey timeframe – The collection of survey data was taken over a period of two and a half months through April, May and June 2012, the number of requests sent is unknown as outlined previously. In order to obtain non bias data response and gain a wider sample of the population the use of an outside company to gather the survey responses was used. Consideration to the Waikato University Qualtrics system was considered however various test survey formats were discussed with colleagues and the end result favoured the outside company product.

The Survey Questions

The Survey was made up of the following questions:

Which Region are you from?

- Auckland & greater Auckland region
- Canterbury - mid South Island
- Central North Island
- Deep South – lower South Island
- Lower North Island
- Northland – Upper North Island
- Upper South Island

This was designed to look at any differences between regions when it came to costs or spending patterns

How many horses do you have?

This question asked participants for a number range of

- 0
- 1
- 2 – 5
- 6 or more

Question to determine the level of ownership the participants had, it also was used to determine the spend patterns of people who participate in equestrian related activities but do not own their own horse.

How much do you spend annually on:

- Farrier or Hoof Trimmer
- Vets
- Dentist
- Massage, chiro, physio or other equine therapist
- Saddlefitters
- Grazing, agistment or livery
- Feed
- Hay
- Supplements
- Wormers, and parasite control

- Barn, stable, tack room or truck supplies
- Paddock and pasture maintenance
- First Aid Kit
- Regular purchases of tack
- Rugs and rug maintenance
- Clipping or show prep
- Clothing (for you)*
- Lessons, Clinics etc*
- Off the horse - Events, and Shows Books, videos, DVDs, magazine subscriptions etc*
- Recreational Costs - Memberships, caps or permits*
- Annual vehicle expenses - COF, WOF, RUC etc
- Vehicle Maintenance

These questions are directly related to costs associated with each activity, they can then be divided into specific categories such as Health and Wellbeing, Professional Services, Housing and Feeding, Equipment and Clothing, Travel, Education and Events (Including Accommodation)

* These questions were included in the survey for those participants who selected 0 in the second questions relating to how many horses do you own. These participants did not have the option of completing the horse related costs questions.

How much would you spend on:

- 1st horse
- 2nd horse
- Show or competition horse
- Childs pony
- Stallion or breeding stock

This question was designed to see to what level the participants were prepared to pay for the purchase of their horse/s

Capital Expenditure Questions asked:

- Truck/float purchase
- Land Purchase
- Buildings costs
- Arena costs
- Saddles etc.

Questions designed to gain a measure of funds used on major capital items used to support their sport.

Limitations and advantages of the questionnaire

The collection of data through a web based online questionnaire has a number of limitations; the questioning technique used could also have an effect on the responses gained from participants. The use of technology for the collection of data for his survey would indicate that those who choose to respond have access to a computer and have consistent access to the internet. Although the majority of the New Zealand population do have access to the internet, the more affluent parts of New Zealand society have greater access to this form of communication. However due to the nature of the survey I am collecting data for, and the preliminary results gathered, it could be assumed that the majority of potential survey participants would need to have a higher level of disposable income than the national average in order to participate in this sport.

A common line of thought amongst the equestrian community is that recreational and competitive riders do not want to know how much they spend on their horses, with a predominantly larger female participation rate, they can be quoted as saying "I don't want my husband to know how much they cost" (Discussion held with New Zealand Horse & Pony Magazine editor Rowan Dixon)

The limitations on using a web based method of gathering data is the ability to gain access to a large percentage of the population, the amount of data and websites now available on the web, alongside the more sophisticated antivirus and spam software that is being used now, the ability to engage the population sufficiently to solicit participation is limiting. The nature of the data being collected as described above is another limiting factor in motivation to complete.

The advantages of using quantitative analysis when surveying participants about their direct spending habits are that the quantitative data gained from the responses allows mathematical and statistical analysis of the information to be undertaken with an aura of scientific respectability. The results appear to be based on objective laws rather than the values of the researcher. Statistical tests of significance give researchers additional credibility in terms of the interpretations they make and the confidence they have in their findings.

The analysis of quantitative data provides a solid foundation for description and analysis. Interpretations and findings are based on measured quantities rather than impressions, and these are, at least in principle, quantities that can be checked by others for authenticity. (Denscombe, 2010)

Survey Results

Question 1 - What region are you from?

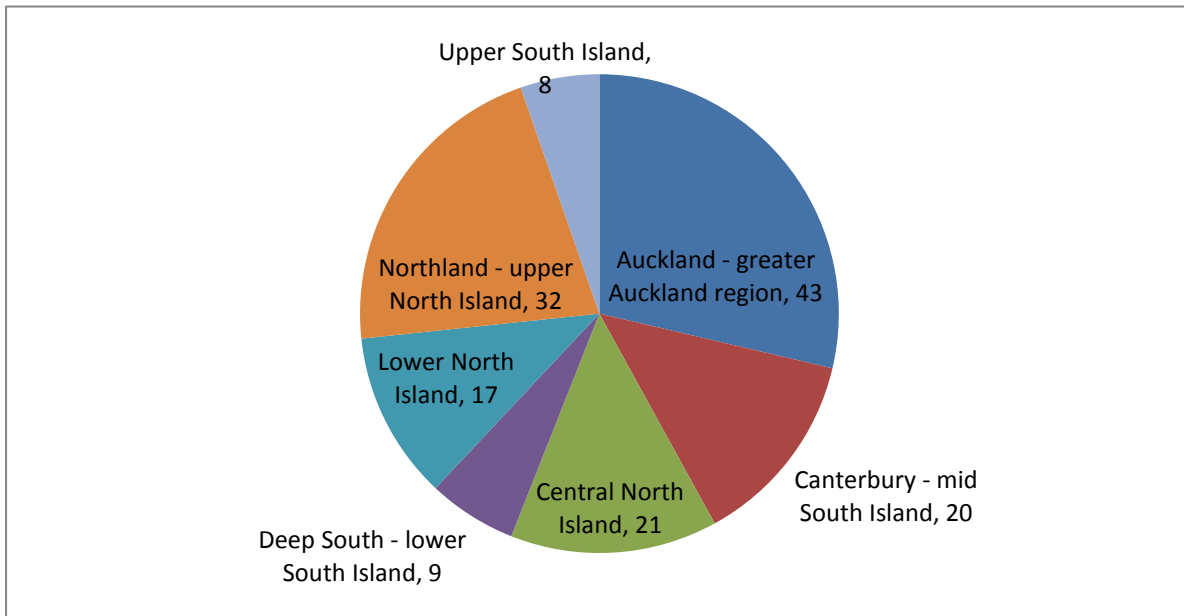


Figure 4

Total of 150 responses, the distribution spread of the responses is consistent with the distribution of the population in New Zealand, with the greater number of responses coming from Northern regions. There were a good response rate from the lower North Island; this would be predominantly Wellington based respondents. The South Island response is expected with the majority of horse owners living in the Canterbury region. However the lower response rate from the Upper and Lower South Island could influence their average costs returns, a significantly lower or higher return would have a larger influence on the average when compared to other regions.

Question 2 – How many horses do you own?

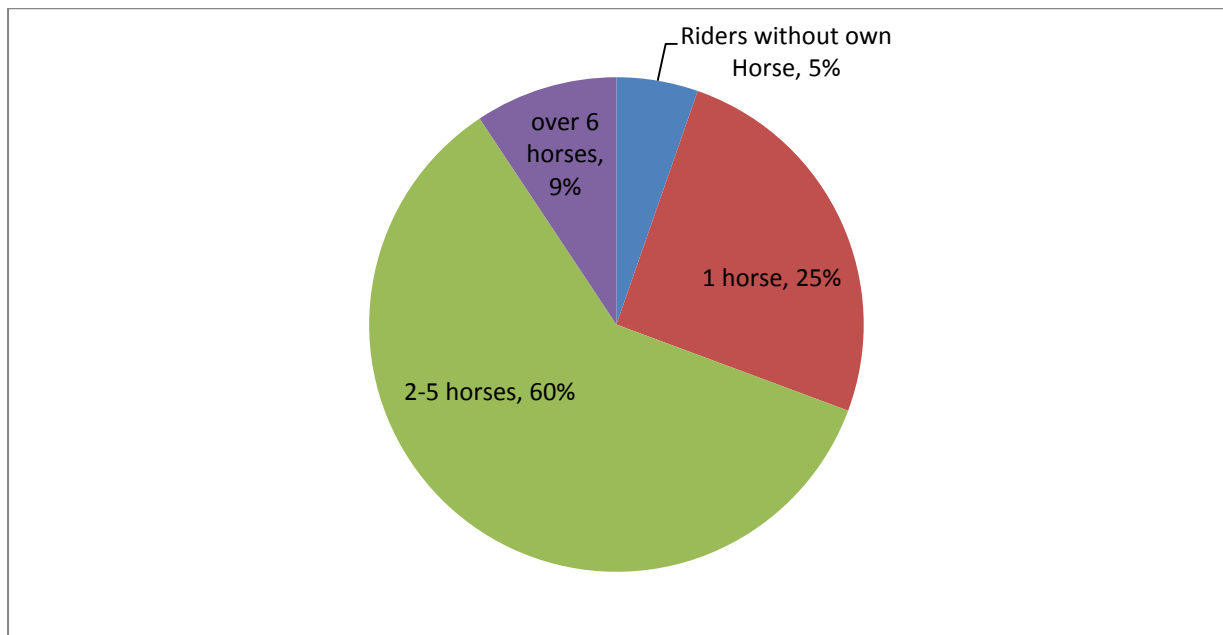


Figure 5

The results show the majority of respondents own between two and five horses, in retrospect this question could have been split further to show exactly what the split of horse numbers were. It could have been used to show if there was a difference between average costs for an owner with two horses versus an owner with four horses for example.

The result findings are consistent with other surveys that have been conducted in New Zealand, the New Zealand Horse and Pony Magazine conducted a survey of its readers in March 2011, their results show that 41% of respondents owned between 2 and 3 horses. They had a response rate of 2000 readers out of a readership of 70,000. The response rate was influenced by the offer of prizes and free magazine subscriptions for a number of respondents. The survey did not ask respondents about their spending habits or how much they spent per horse per year. When questioned the editor quoted "most owners would not want to know how much it is costing them" (Dixon, 2011)

The problem with the respondents quoting the exact number of horses they own is that you then need to state a date for when they owned that number of horses to get a balanced survey response. The costs associated with owning a horse in this survey are on a per horse basis, respondents are asked to divide the total cost by the number of horses they own.

The number of horses owned would be expected to have an influence on the costs associated with pasture and property maintenance, the higher number of horses the more damage therefore higher costs. The difficulty in this survey and for any other survey to conclude is the property owner may

attribute the property maintenance against the two horses they own, but they have another two horses on their property that are owned by individuals who are paying grazing costs to the property owner. However the property owner attributes all costs to the number of horses they individually own. When conducting animal numbers the Agribase survey address this by asking how many animals you own and how many animals do you have on your property, it also asks how many you have on another property. The responses for this should then determine a more exact number of animals.

Distribution of Expenses

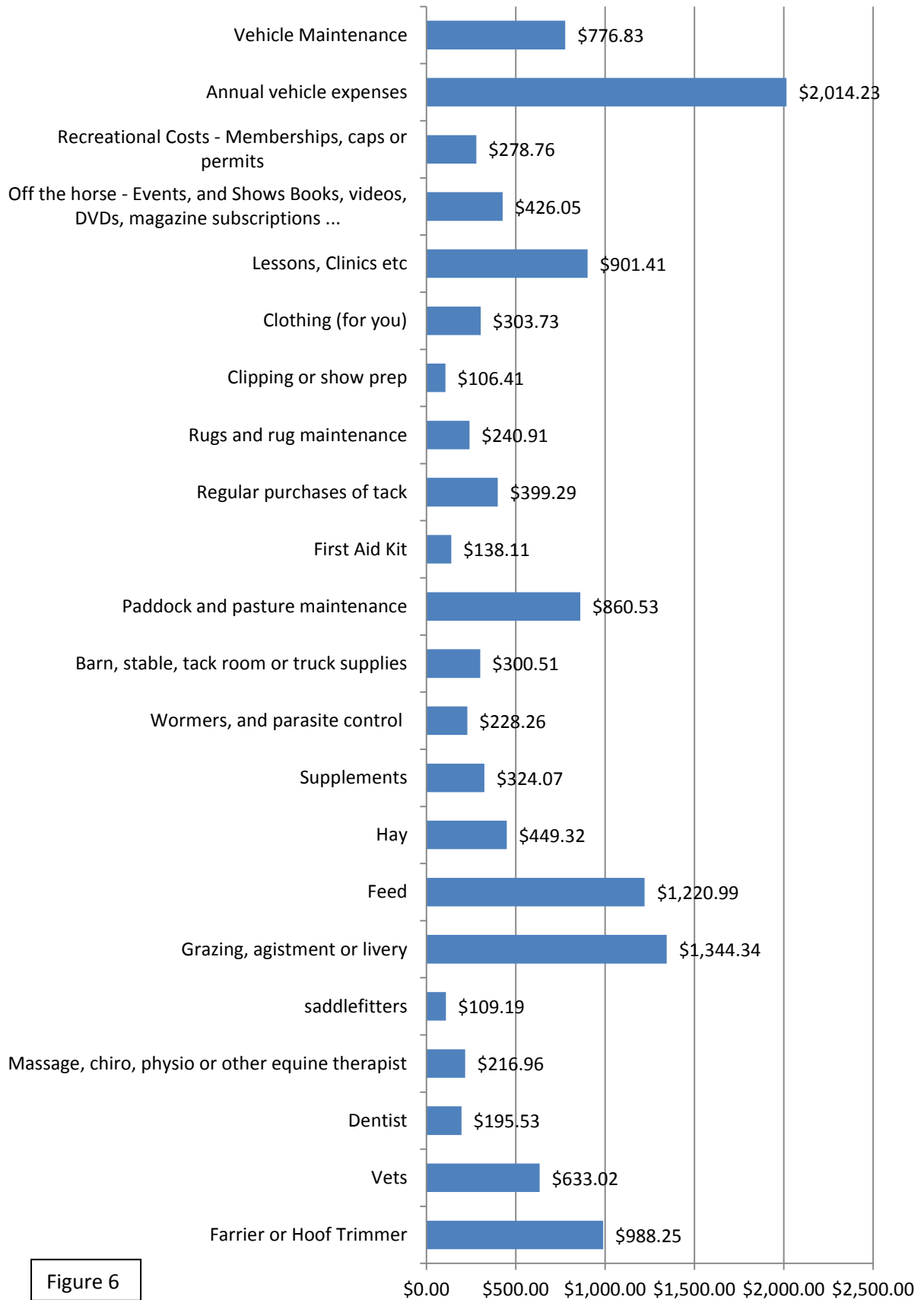


Figure 6

Figure 7: Summary of expenses

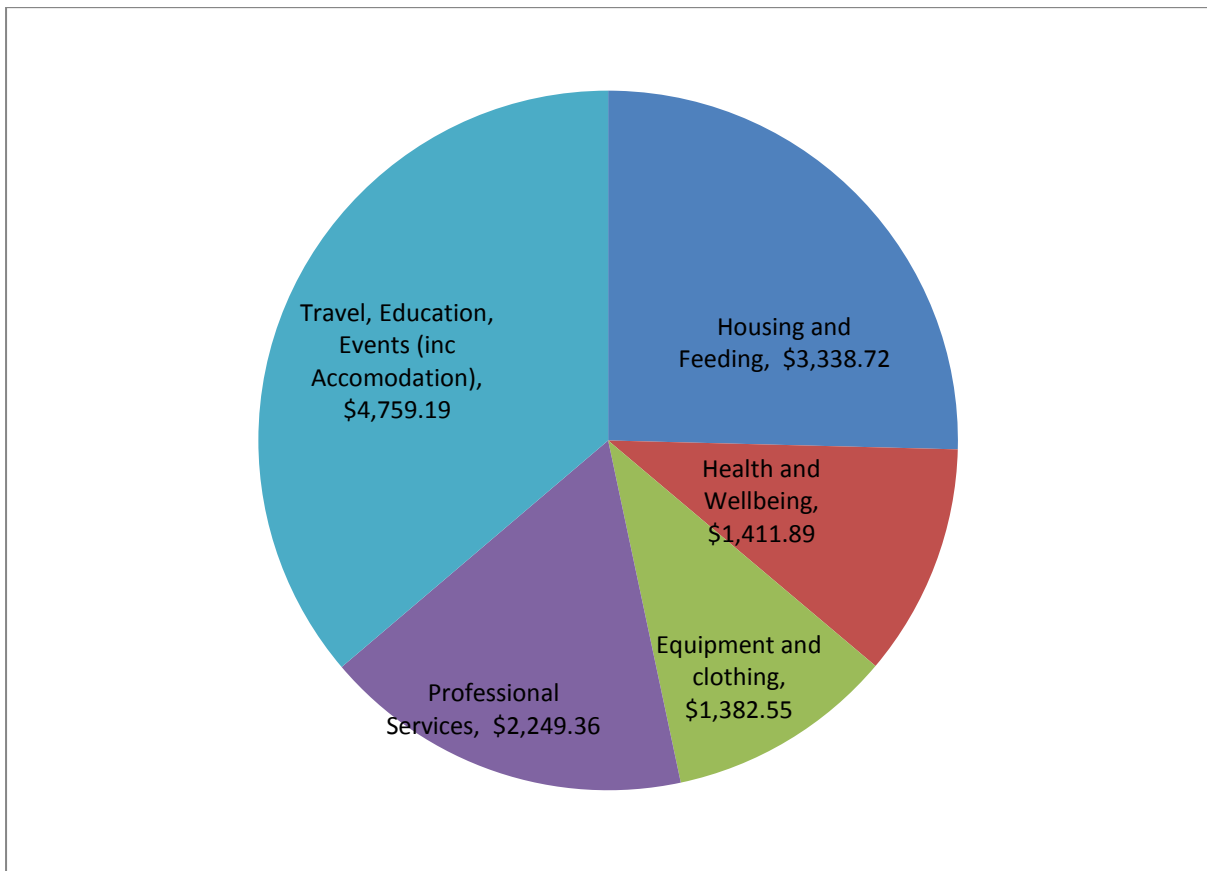
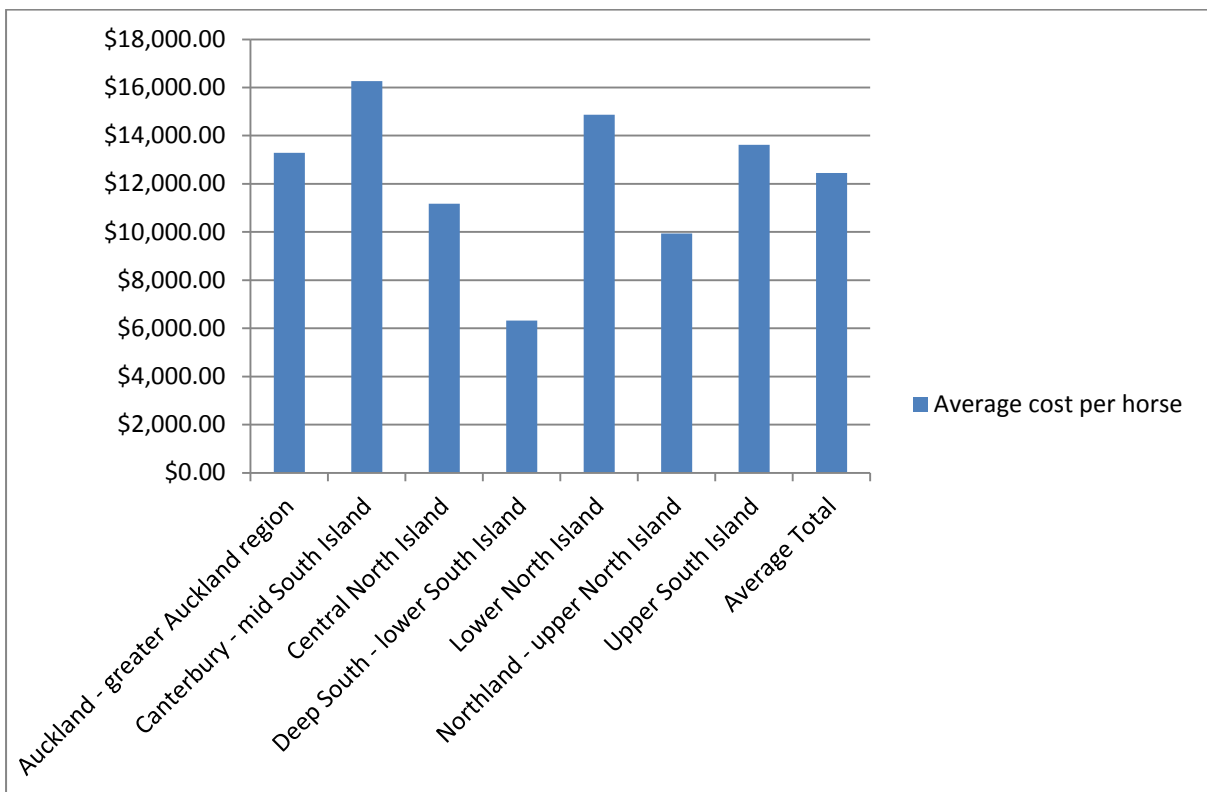


Figure 8: Average Cost per Horse



Summary of Results

The average cost of keeping a horse in New Zealand is \$12,456.71 per annum, multiply this by the 80,000 sport horses it is estimated this expense to be approximately \$1 billion New Zealand dollars per annum. This figure does not include capital purchases required for keeping the horses or major saddlery, transport and property purchases. The Horse and Pony Survey 2011 states that approximately 70% of horse owners in New Zealand own the land they keep their horses on. The average costs of keeping a horse in New Zealand figure is comparable to initial informal research completed by the author when discussing the topic with horse owners who completed sets of financial accounts for their equestrian business and could justify all equestrian related expenses and divide this by the number of horses they owned during that period.

When broken down, the first major costs associated with this are transportation expenses; this is valid as there are limited numbers of places to ride horses in New Zealand and therefore participants are required to transport their horses to suitable places to enable them to partake in their chosen equestrian activity. The survey results do show a large range in these expenses between respondents, this would be expected as a person with one horse who does not travel with their horse will have much lower costs than someone who has a large horse truck who travels the length of the country to competitions. The survey results from the British survey do not include transportation costs in their calculations, they also do not include costs associated with rider apparel, subscriptions etc.; they are purely focused on the direct cost to keep the horse alive for one year. Therefore their per horse cost of approximately £3,105 per horse would appear to be higher compared with the New Zealand results if semi direct costs associated with horse ownership was fully excluded.

The method of excluding costs for transport, clothing and education of the rider out of the direct costs of keeping a horse appears partially flawed in my opinion. Without the education of the rider a separate person would be required to fulfil that void and an expense would be incurred for this service. The person responsible for the horse would not purchase the items of specialised clothing required for riding and looking after their horses if they did not have horses so this inclusion is valid, the wear and usage of the clothing also has a direct correlation with the number of horses being owned by that person. The more times you ride the faster you will wear out that item of clothing, if you have twice as many horses as another person you are more likely to ride more often and therefore wear items of clothing faster or require more items of clothing.

The set-up of the riding system in the UK is quite different from New Zealand, they have a large number of established bridleways for recreational riding, a much lower percentage of horse owners own the land on which their horses are kept, they have large numbers of riding schools to cater for non-horse owning participants. These riding schools will be able to operate on a better scale than the individual who owns one or two horses on their own land.

The variation between results between Canterbury and the lower South Island could be attributed to a number of factors. Firstly the number of responses, the lower response rate could result in a couple of low numbers distorting the average. This appears to have occurred in the transport sector, with a \$3000 difference on annual vehicle expenses and \$640 on vehicle maintenance respectively. The lower cost of land could have a contributing factor, the horse owner can afford to have a larger tract of land and therefore more amount of natural feed sources lowering the requirement for supplementary feeding. There are also lower figures for some of the professional services, this could be either that the charges are a lot lower in the deep south, or that there is a lack of access to these services and therefore the respondents to the survey do not use these services so the overall average result was distorted to a lower level. However their results are included in the overall averages for the country so overall a fair representation of the results is achieved.

The second major expense area is the feeding and housing of the horse, this would be expected to be a major area of expense for a horse owner, for people who own their own land this figure would be lower, however if interest costs on the land were factored in then this figure would be much larger. The removal of the interest costs is partially offset by the figure for grazing, livery or agistment being included, this allows some of the interest servicing costs to be covered by land owners who graze horses on their land and receive income for this in addition to their own horses grazing at no costs.

The third major area of expense is the use of professional services, these services are essential for the upkeep and welfare of the horse. The figures used in this section can be justified through actual costs for the service and the regularity the service needs to be completed. The horse needs to be shod every four to eight weeks; if the horse is not shod then they will need to have their feet trimmed at about eight week intervals. The cost for shoeing a horse is from between \$100 and \$250 dollars, factors for the range are the reuse of the horse shoes, the skills of the farrier, the demand for their services, the complexity of the job at hand and the type of shoes used on the horse. If the figure of \$140 is used at a period of every six weeks then this will equate to approximately \$1200 per annum. The trimming cost at \$40 - \$60 per trim would equate to approximately \$350 per annum in costs. There is of course a mixture of these costs in between, an owner may have their horse shod

during the summer months when they are riding a lot, then they may only have their horse trimmed during the winter months when they are not riding their horse.

The use of labour has not been included in this survey; the majority of sport horse owners complete their own work in their own time outside of their usual paid employment. The estimate of the employment supported by the sport horse industry in New Zealand can be justified by using the figures from other countries to calculate an employment number. The Canadian study has a ratio of 1 FTE to 6.5 horses; the USA has 1:6.6 and the Irish 1:6.8, by using an average of these three figures gives us a ratio of 1 FTE to 6.63 horses. This would equate to just over 12,000 FTE's for the New Zealand sport horse industry, at the minimum wage rate of \$13.50 per hour over a 40 hour paid working week this is a contribution of approximately \$6.5 million dollars per annum.

The survey questioned the land values of the respondents who owned the land, this averaged out at \$410,483. This question was asked of the land value only and excluded the value of improvements like stables, shedding, riding arenas and main dwellings. The national house price sale average was \$411,788 at the end of May 2012, this pricing includes all improvements but the figure does exclude the sale of farms which are treated separately. The difficulty in gaining meaningful statistical information on the property price index is that the median house sale price index may include a number of lifestyle properties that are included in this study, but a number of the properties in this study may also fall out of the housing sector and be included in the farm price sector. The question in the survey may have also been susceptible to skewed results by the respondent answering the question with the purchase price of their land rather than the true market value. This would have an effect of lowering the overall average.

The difficulty in getting a true figure for this answer is that who really knows what the true market value is for their land, using the government valuation database would seem to be a logical step as the figures used should be consistent. However I am reluctant to rely on their accuracy due to studies in my area which show a range of \$40,000 per hectare difference across three neighbouring properties of similar size, these figures were for the land only and did not include improvements. From a market point of view, although the three land parcels were next to each other, the one with the lowest value had a larger proportion of higher quality land and from a market perspective would in theory have a higher value than the other two. In contrast the one with the lowest quality land had the highest bare land values of the three; this evaluation of the government valuation process leaves little reliability in the figures available through the government valuation process.

Equine Valuation

Figure 9: Willing purchase prices

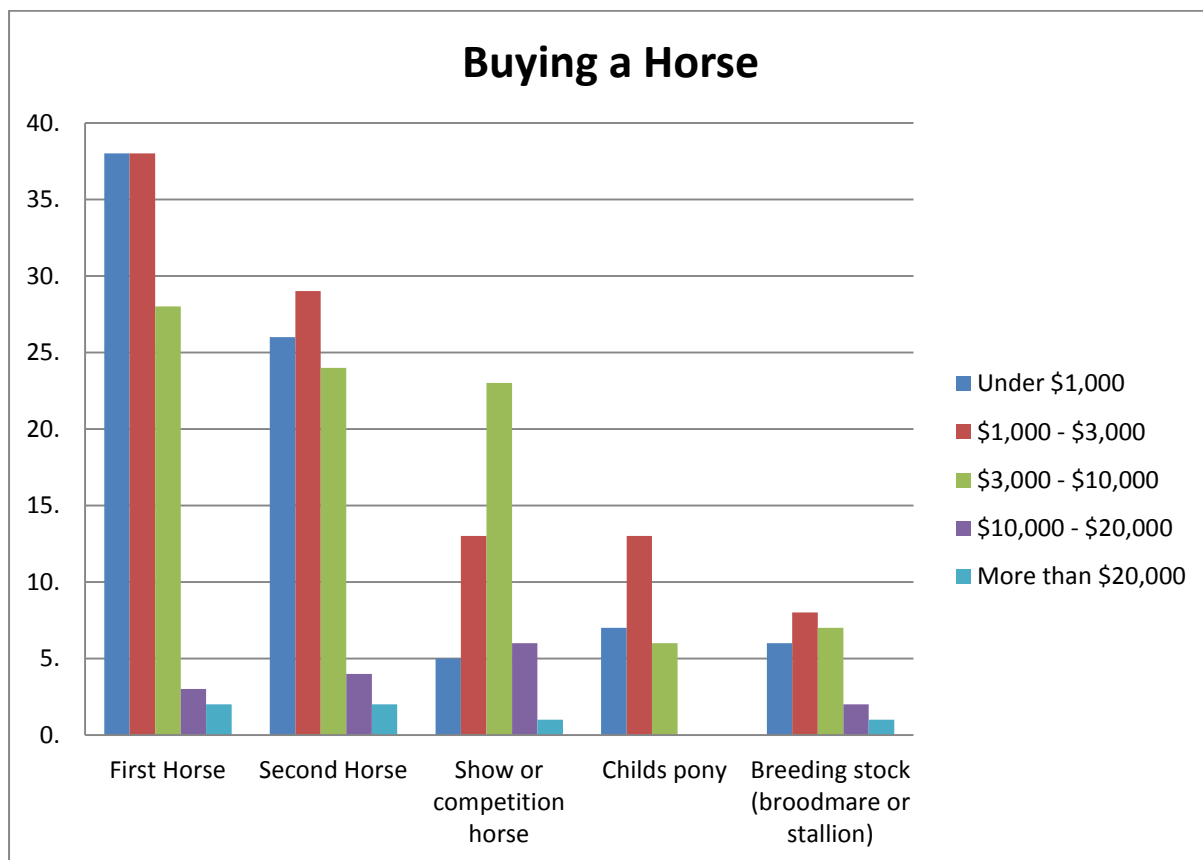


Figure 9 graphs the results from the survey when asking respondents how much are they willing to pay for a certain type of horse. The first horse is defined as the type of horse you would buy for the first time, the second horse would be one you would buy once you had more experience, likewise the child's pony is most likely to be more suitable for a beginner, but some respondents may have interpreted the question as to how much would they be willing to pay for a pony for their child. The show or competition horse is a horse that would be destined for a competitive career, either in the show ring or in one of the Olympic disciplines. Breeding stock incorporates both stallion and broodmare, this is subject to a wide variance due to people not wanting to pay much for a broodmare, maybe using a cast off from racing, to the price they would pay for a stallion, maybe importing one from overseas.

The interesting feature of this graph is that the price the majority (70%) of people are willing to pay for their first horse is under three thousand dollars, yet their ongoing costs to maintain that horse are going to be more than three times that figure every year. This figure drops to 65% for their

second horse, despite by this time having knowledge of the costs involved in keeping a horse. The graphs show people are more willing to pay more for a competition horse, if this is combined with the number of members of the New Zealand Equestrian Federation, approximately 6000, with 10,000 registered horses, then the majority of sport horses in New Zealand that are used for recreational purposes, 70,000, will have a value of under \$3,000 based on willing seller and willing buyer market conditions.

Conclusion

The sport horse industry in New Zealand contributes over \$1 billion dollars to the New Zealand economy annually, this equates to just over 0.5% of GDP. The sport horse industry directly sustains over 12,000 FTE's, when this is combined with the racing industry the figure raises to 21,248 direct FTE's. The combined FTE contribution equates to \$11.5 million dollars in wages per annum going into the New Zealand economy. The exact contribution of the industry value on land prices is not yet determined, this would require further investigation and would require an in depth analysis and first hand market reviews in order to gain credible data. Basic analysis of data to hand suggests the average sport horse owner is willing to pay an additional \$220,000 for their property to enable them to keep their horses at home. Using the Horse and Pony Magazine survey results with a figure of 70% of horse owners owning their own land and the average number of horses owned at 2.4, then with 80,000 sport horses in New Zealand, owners have spent an additional \$5 billion dollars on property in order to support their pursuit.

The results from the survey data produced similar results to the information gathered from overseas research when converted back to New Zealand dollars and compared on a like for like basis.

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