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Economic and Social Indicators for the Queensland Charter Sector in 2021/22

A report for Fisheries Queensland

14 June 2024



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Glossary

Active business: refers to a fisher operating a fishing business which fished at least one day during the relevant period.

Business profit: is defined as *gross operating surplus (GOS)* less *depreciation* less *owner-operator and unpaid family labour*. Business profit represents a more complete picture of the actual financial status of an individual firm, compared with GOS.

Business profit before depreciation: is defined as gross operating surplus less imputed wages for owneroperator and unpaid family labour.

Client days: refers to the total number of 'single client day trip equivalents' by converting multi-day trips to day trip equivalents and counting each trip once for each client on it. For example, if a charter operator undertook 10 day trips with 4 clients on each trip plus 2 multi-day trips that went for 3 days with 2 clients on each trip the fisher undertook (10 day trips x 4 clients) + (2 multi-day trips x 3 days x 2 clients) = 52 client days. Client days data were sourced from Fisheries Queensland logbooks and collected in the survey to allow scaling up of the sample by this variable. What represents a paying client is unclear in Charter Sector logbooks as an entry is required for 'number of fishers' and 'number of guests'. The most common entries for 'number of guests' are zero or the number entered for 'number of fishers' so the number of paying clients was assumed to be the maximum of these two numbers on any one trip.

Cost of management services: management services will generally include biological monitoring and reporting; policy, regulation and legislation development; compliance and enforcement services; licensing services; and research.

Depreciation: refers to the annual reduction in the value of total capital due to general wear and tear or the reduction in value of an item over time. Note this is a measure of economic depreciation not accounting depreciation¹.

Employment: is a measure of the number of working proprietors, managers, directors and other employees, in terms of the number (total jobs) or full-time equivalent (fte) jobs. One fte is considered to be 37.5 hours for 42 week per year.

Gross income: refers to the cash receipts received by an individual firm and is expressed in dollar terms. *Gross income* is calculated as the number of client days for the year multiplied by the average trip price per client per day.

Gross margin: is defined as *gross income* less *total variable costs*. This is a basic measure of profit which assumes that capital has no alternative use and that as fishing activity (trip days) varies there is no change in capital or fixed costs.

Gross operating surplus (GOS): is defined as *gross income* less *total costs* and is expressed in current dollar terms. GOS does not include a value for owner/operator wages, unpaid family work, or depreciation.

Gross state product (GSP) and Gross regional product (GRP): are measures of the net contribution of an activity to the state/regional economy. Contribution to GSP or GRP is measured as value of output less the cost of goods and services (including imports) used in producing the output. It can also be measured as household income plus other value added (*gross operating surplus* and all taxes, less subsidies). It represents payments to the primary inputs of production (labour, capital and land).

Gross value of production (GVP): refers to the value of the total annual trips for the Charter Sector or a sector of it and is measured in dollar terms. GVP, generally reported on an annual basis, is the number of client days for the year multiplied by the average trip price per client per day. It is equivalent to *gross income*.

Household income (economic contribution): is a component of *gross state product* (GSP) and *gross regional product* (GRP) and is a measure of wages and salaries, drawings by owner-operators and other payments to labour including overtime payments and income tax but excluding payroll tax.

Owner-operator and unpaid family labour: in many fishing businesses there is a component of labour that does not draw a direct wage or salary from the business. This will generally include owner/operator labour and often also include some unpaid family labour. The value of this labour needs to be accounted for which involves imputing a labour cost based on the amount of time and equivalent wage rate. In profitability calculations this labour cost can be included simply as another cost so that *gross operating surplus* takes account of this cost. Alternatively, it can be deducted from GOS to give a separate indicator called *business profit before depreciation* in this report. Owner-operator and unpaid family labour is separated into variable labour (fishing and repairs and maintenance) and overhead labour (management and administration). The minimum wage rate for 2021/22 was used to value the time spent on farming, and repairs and maintenance and double the minimum wage rate for 2021/22 was used to value the time spent on management and administration.

Profit at full equity: is calculated as *business profit* plus *rent, interest and lease* payments less *depreciation associated with leased capital. Profit at full equity* represents the profitability of an individual fishing business, assuming the business has full equity in the operation, i.e. there is no outstanding debt associated with the investment in capital. *Profit at full equity* is a useful absolute measure of the economic performance of firms.

¹ Accounting depreciation allocates the cost of an asset over its useful life.

Rate of return on total capital at full equity: is calculated as *profit at full equity* divided by *total capital at full equity* multiplied by *100*. This rate of return is expressed in percentage terms and is calculated for an individual fishing business. It refers to the economic return to the total investment in capital items and is a useful relative measure of the performance of individual firms. *Rate of return to total capital at full equity* is useful to compare the performance of various fishing businesses, and to compare the performance of other types of operators, and with other industries.

Total costs: defined as total variable costs plus total fixed costs. It does not include depreciation.

Total fixed costs: are costs that remain fixed regardless of the number of client days or the amount of time spent om trips. As such these costs, measured in current dollar terms, are likely to remain relatively constant from one year to the next.

Examples of fixed cost include:

- insurance
- administrative and industry fees
- office and business administration (communication, stationery, accountancy fees)
- interest on loan repayments and overdraft
- advertising or marketing
- leasing.

Total variable costs: are costs which are dependent upon the number of client days or, more commonly, the amount of time spent on trips. As clients or fishing time increases, variable costs also increase. Variable costs are measured in current dollar terms and include the following individual cost items:

- fuel, oil and grease for the boat (net of diesel fuel rebate)
- bait
- ice
- provisions
- crew payments
- fishing equipment, purchase and repairs (lines, etc.)
- repairs and maintenance: ongoing (slipping, painting, overhaul motor).

Trip days: refers to the total number of 'day trip equivalents' by converting multi-day trips to daytrip equivalents. For example, a 3 day trip converts to '3 trip days'. Trip days data were sourced from Fisheries Queensland logbooks and collected in the survey to allow scaling up of the sample by this variable.

Total capital: includes capital items that are required by the fishing business to earn the income. It includes boat hull, engine, electronics and other permanent fixtures and tender boats. Other capital items such as motor vehicles, sheds, and jetty/moorings are included to the extent that they are used in the fishing business. The value of capital utilised by the business is included in total capital whether the business owns or leases it. Total capital should not be confused with financial capital which is money provided by lenders for a price (interest).

Abbreviations

ABS	Australian Bureau of Statistics
CPI	consumer price index
fte	full-time equivalent
GOS	gross operating surplus
GRP	gross regional product
GSP	gross state product
GVP	gross value of production
R&M	repairs and maintenance
RBA	Reserve Bank of Australia

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In the preparation of economic and social indicators for the Charter Sector, 2020/21, BDO EconSearch has relied heavily on the voluntary cooperation of fishing operators in providing data for the surveys and are particularly grateful for the time and cooperation generously provided by fishing businesses in responding to the rather lengthy questionnaire. BDO EconSearch is also indebted to various individuals and institutions for providing the necessary information to supplement the survey data. Industry representatives and Fisheries Queensland officers provided assistance, were supportive of the data collection and offered valuable advice.

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Executive summary

This report presents economic and social indicators for the Queensland Charter Sector for the 2021/22 financial year. This forms the fifth consecutive financial year of annual indicators.

BDO EconSearch was contracted by Fisheries Queensland to develop economic and social indicators to inform stakeholders with published financial, economic and social information about professional fishers (i.e. commercial fishers and charter operators) in Queensland. Annual indicators were previously reported for financial years 2017/18 to 2020/21 (BDO EconSearch 2023). This report presents the Charter Sector results for the 2021/22 financial year. All dollar values throughout the report are presented in nominal terms.

The Charter Sector includes all businesses that provide charter fishing services in Queensland under a Charter fishing licence provided by Fisheries Queensland. These businesses typically charge a fee to take clients on recreational fishing trips with a broad range of objectives ranging from low-cost day trips in rivers or bays to multi-day trips targeting sport and game fish on luxury boats. Some businesses may offer guided fishing trips in waters shallower than 2 meters and are currently not required to be licenced as a charter operator. Businesses which are not licenced charter operators are not included in this report. A summary of key economic indicators is presented in Table ES-1.

Indicator	2017/18	2018/19	2019/20	2020/21	2021/22
Client days (no.)	132,276	120,331	74,919	89,037	81,577
Trips (no.)	15,255	14,081	8,953	10,353	8,582
GVP (\$m)	\$35.8m	\$33.1m	\$24.6m	\$30.9m	\$25.3m
Export value (\$m)	\$5.9m	\$5.4m	\$1.2m	\$0.4m	\$1.4m
Active businesses	180 businesses	176 businesses	149 businesses	139 businesses	114 businesses
Return on total capital ^a	-0.6%	-2.9%	0.9%	5.0%	10.4%
Gross state product (direct + flow-on)	\$53.1m	\$50.3m	\$33.5m	\$40.0m	\$31.0m
Employment (direct + flow-on)	464 fte jobs	449 fte jobs	306 fte jobs	325 fte jobs	238 fte jobs

Table ES-1	Summary of key econd	mic indicators, 2017	7/18 to 2021/22	for the Charter Sector
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^a Total Capital includes the capitalised value of leased equipment.

Overview of approach

Development of economic and social indicators for the Charter Sector occurred in parallel to similar research in Queensland's commercial fisheries and aquaculture industry. The Charter Sector research included a separate data collection process and analysis.

The approach followed the steps:

- 1. Collect administrative business level data
- 2. Collect sector level data
- 3. Conduct a survey of 2021/22 fishing business activity
- 4. Scale up the survey sample to represent the population of active businesses
- 5. Calculate indicators.

The 2021/22 survey received a total of 23 usable responses. The responses represented 20 per cent of the estimated population of active charter operators in 2021/22. More active businesses (those with a higher

number of client days) are better represented than less active businesses in the sample. Approximately three quarters of survey respondents were within the most active half of businesses within the population of charter operators.

The refusal rate for participating in the survey was higher than expected. Of the active charter businesses contacted, 47 per cent refused to participate in the survey. Reasons for refusal included being too busy, mistrust of and unwillingness to support Fisheries Queensland, recent business closure or sale, and lack of interest in the study. The previous Charter Sector business survey in 2019/20 also included businesses that operated in 2019/20 but reported no activity to Fisheries Queensland. Only businesses that reported Charter Sector activity to Fisheries Queensland in 2021/22 were included in the 2021/22 survey sample. The refusal rate combined with the smaller sampling frame resulted in a notably smaller sample size than the most recent detailed business survey in 2019/20. The 2019/20 survey had 55 responses, representing 37 per cent of the population.

The confidentiality of responses was made clear to respondents including that no individual response would be identifiable in reporting or provided to Fisheries Queensland and that any statistic published would be based on at least five responses.

Clients, gross value of production and exports

The total number of client days in the Charter Sector decreased from approximately 132,000 in 2017/18 to just under 82,000 in 2021/22, a decline of 38 per cent. Consequently, Charter Sector GVP declined by 29 per cent between 2017/18 (\$35.8m) and 2021/22 (\$25.3m). The lowest year for the period was 2019/20, with just under 75,000 client days and \$24.6m in GVP. This was primarily due to the impact of the COVID-19 pandemic and lockdowns preventing or discouraging travel throughout the 2019/20 financial year. The value of exports² accounted for approximately 17 per cent of GVP in 2017/18 but declined to 5 per cent in 2021/22.

Prices and customers

Average price (per client day) increased from \$271 in 2017/18 to \$310 in 2021/22 and varied across business model and main trip length of operator. By business model, the price per client day in 2021/22 was lower for game and sport fishing focused businesses (\$250) than for coral reef, rocky reef and inshore fishing focused businesses (\$373). By main trip length, operators focused on day trips had a slightly higher average price per client day (\$311/day) than multi-day focused operators (\$304/day).

The most significant market for the Charter Sector in 2021/22 was Australia. Surveyed businesses reported that 95 per cent of customers were domestic compared to 99 per cent in 2020/21, and 83 per cent in 2017/18. By business model, international customers spent more on game and sport fishing focused businesses (8 per cent) than on rocky reef, coral reef, and inshore fishing focused operators (3 per cent) in 2021/22. International customers spent equally on multi-day focused operators and single day operators (5 per cent each).

Management costs

Estimated total Fisheries Queensland management costs for the Charter Sector were \$1.5m in 2021/22, a gradual increase from \$1.2m in 2017/18. As GVP also decreased over this period, this led to an increase in management cost as a proportion of GVP from 3.3 per cent in 2017/18 to 6.0 per cent in 2021/22.

² Exports were estimated by applying each fishing business's estimate of the total proportion of their customers that are international visitors to their total revenue.

Business financial indicators

In 2021/22, the average business's activity in the Charter Sector generated a gross operating surplus of \$70,000 and profit at full equity of \$52,000, leading to a return on investment at full equity of 10.4 per cent. This means the average business earned enough income to cover its costs, the imputed cost of unpaid labour used to operate the business, and the cost of capital depreciation. As businesses adapted to post COVID-19 conditions, remaining operators successfully increased their total revenue and decreased their costs relative to income. This resulted in improved profitability for businesses between 2019/20 and 2021/22 as average profit at full equity and return on investment increased.

Return on investment varied widely across regions in 2021/22 from 28.1 percent in the Mackay, Isaac & Whitsunday and Central Queensland region to -3.7 per cent in the Gulf of Carpentaria and Far North, Cairns and Townsville region. The higher profitability region in 2021/22 (Mackay, Isaac & Whitsunday and Central Queensland) was characterised by low fixed cost operations when compared to the state average.

Economic contribution

In 2021/22, the Charter Sector contributed an estimated \$31.0m in gross state product (GSP) and 238 fulltime equivalent (fte) jobs to the Queensland economy. This contribution included \$15.6m in GSP and 129 fte jobs from direct charter operation activity, and \$0.2m in GSP and 2 fte jobs from direct capital expenditure by charter operators. Flow-on effects in other sectors of the Queensland economy added a further \$15.2m in GSP and 107 fte jobs.

Social indicators

The results of the 2021/22 survey indicate that most charter fishing operators felt that they understand the management arrangements, that most operators complied with rules and regulations, and that operators in the Charter Sector were treated fairly. However, only approximately half of the surveyed charter fishing operators trust, and were satisfied with, Fisheries Queensland and their management processes and decisions.

All charter fishing operators felt that their fishing activities are important and most of the surveyed operators plan to stay in the industry. Operators were satisfied with many aspects of being in the industry, with all respondents satisfied with being on the water, working outdoors, the challenge and adventure of the job, and the safety of working conditions. Respondents were less satisfied with the predictability of their income and the total income generated, as well as the current fishing regulations.

All surveyed operators believe that the community perceived the Charter Sector either neutrally or quite positively. Outside of running their businesses, the most time charter fishing operators spent contributing to the community was on volunteering for community services (e.g. RFS, SES, ambulance, schools), followed by time spent participating in marine rescue and recovery, and compiling fishing related information for research (e.g. catch and effort data).

1. Introduction

This report presents economic and social indicators for the Queensland Charter Sector for the 2021/22 financial year.

The Queensland Sustainable Fisheries Strategy 2017-2027 (SFS) sets out a comprehensive reform plan with a number of actions which will improve the management of Queensland fisheries. With respect to actions relating to fisheries monitoring, the SFS requires Fisheries Queensland to deliver a practical and cost-effective system to collect data on economic and social indicators from Queensland fishers and directly related stakeholders (e.g. fish processors, wholesalers, community groups). These indicators will be used by Fisheries Queensland to better understand the economic and social aspects of each fishery and sector, and of the different types of fishers (e.g. level of activity, region of activity, mode of fishing) within each fishery and sector.

These economic and social indicators will be used to inform management decisions and to monitor progress towards desired targets. As these surveys continue, they will provide an appropriate time series that can be used to understand the economic impact of management decisions.

BDO EconSearch was contracted by Fisheries Queensland to develop economic and social indicators to inform stakeholders with published financial, economic and social information about professional fishers (i.e. commercial fishers and charter operators) in Queensland. Annual indicators were previously reported for financial years 2017/18 to 2020/21 (BDO EconSearch 2023). This report presents the Charter Sector results for the 2021/22 financial year. All dollar values throughout the report are presented in nominal terms.

Considering the diverse nature of Queensland's fisheries, management decision making involves a complex mix of biological, economic and social considerations. There is a need to identify and explore cost effective and efficient ways to incorporate economic and social information in decision-making processes.

1.1. Charter Sector background

For the purpose of this report, the Charter Sector includes all businesses that provide charter fishing services in Queensland under a Charter fishing licence provided by Fisheries Queensland. These businesses typically charge a fee to take clients on recreational fishing trips ranging from low-cost day trips in rivers or bays to multi-day trips targeting sport and game fish on luxury boats. Some businesses may solely offer guided fishing trips in waters shallower than 2 meters and are currently not required to be licenced as a charter operator. Businesses which are not licenced charter operators are not included in this report.

In 2021/22, Fisheries Queensland licensing data and logbooks recorded 283 businesses licenced in this definition of the Charter Sector but only 114 of them provided activity information through logbooks. Some charter operators are not required to hold a licence and these businesses are not required to report their fishing activity to Fisheries Queensland. This means the complete scale of the charter fishing activity in Queensland is not represented in full in this economic and social analysis.

1.2. Report structure

Provided in Section 2 of this report is the method of analysis and a description of the survey of charter operators.

Indicator results are presented in Sections 3 to 5 for the 2021/22 financial year and include:

- gross value of production
- average trip prices
- the cost of management

- business financial indicators (income, costs, profit and return on investment)
- economic contribution indicators
- demographic indicators
- social indicators.

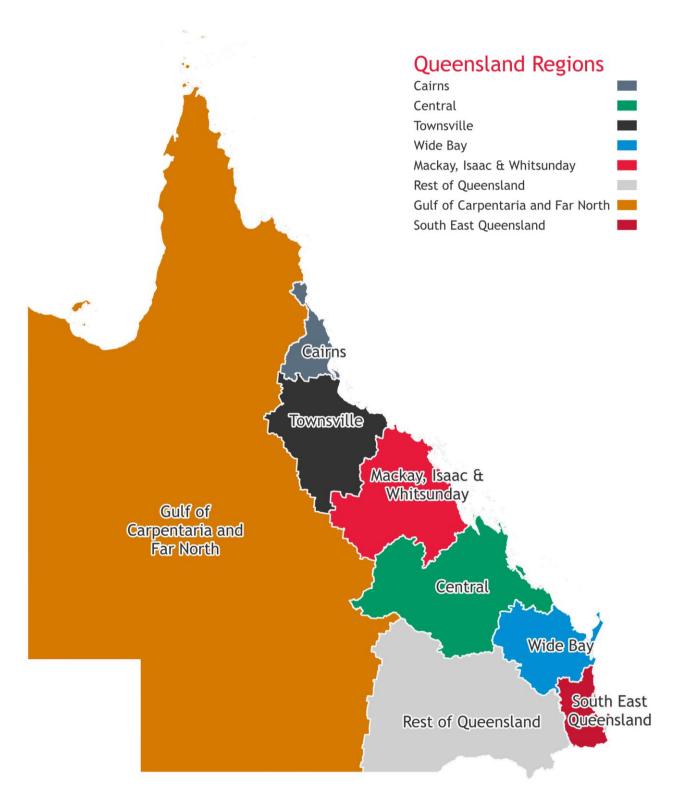
Economic contribution results and business financial indicators are presented for Queensland as a whole and at the regional level based on the SA4 regions as defined by the Australian Bureau of Statistics (ABS) (Figure 1-1). Previous reported regions were defined in accordance with the Department of Agriculture and Fisheries Subregions (BDO EconSearch 2023). Only the following coastal regions are reported:

- Gulf of Carpentaria and Far North
- Cairns
- Townsville
- Mackay, Isaac and Whitsunday
- Central Queensland
- Wide Bay
- South East Queensland an amalgamation of the following SA4s:
 - Sunshine Coast
 - Brisbane East
 - Brisbane North
 - Brisbane South
 - Brisbane Inner City
 - Gold Coast
 - Logan Beaudesert
 - Moreton Bay North
 - Moreton Bay South.

To maintain confidentiality of survey respondents, some regions have been combined and the resulting groups are reported:

- Gulf of Carpentaria and Far North, Cairns and Townsville
- Mackay, Isaac & Whitsunday and Central Queensland
- Wide Bay and South East Queensland.

Figure 1-1 The Regions used for reporting used the Australian Statistical Geography Standard Edition 3.



Source: BDO EconSearch analysis and ABS 2021

2. Method of analysis and definition of terms

2.1. Overview of approach

Development of economic and social indicators for the Charter Sector for 2021/22 occurred in parallel to similar research in Queensland's commercial fisheries and aquaculture industry. The Charter Sector research included a separate data collection process and separate analysis.

The approach followed the steps:

Stage 1: Collect administrative business level data

Data were requested from Fisheries Queensland's monitoring and administrative systems including catch and effort data from available charter fishing operation logbooks and charter fishing licence data from the licencing data base. All were collected for 2021/22.

Stage 2: Collect sector level data

Data were requested from Fisheries Queensland's monitoring and administrative systems for the cost of management for 2021/22. The allocation of management costs between fisheries and sectors was based on the Allocation of Fisheries Management Costs to Queensland's Commercial Fisheries for the 2017-18 and 2018-19 Financial Years: The Process of Allocation (Webley and Probst 2020).

Stage 3: Survey of fishing businesses

A survey of fishing businesses was undertaken (see Section 2.2) to collect various data items that are not held by Fisheries Queensland but are required to calculate economic and social indicators. This included trip types and prices, operating costs, employment (including unpaid), capital value and depreciation, and social and demographic information for 2021/22. Data were collected respecting the confidentiality of fishing businesses and were used by BDO EconSearch to produce the economic and social indicator reports. The data were not distributed outside of BDO EconSearch and have not been provided to Fisheries Queensland.

Stage 4: Scale up the survey sample to represent the population of active businesses

A set of weights was developed to scale up the sample to represent the estimated population activity in each subregion in each financial year in terms of: active businesses, trip days and client days. The weights were applied to the relevant data items i.e. in most cases capital and fixed costs were weighted by number of active businesses, most variable costs (such as fuel and variable labour) were weighted by trip days, and revenue and some variable costs (such as provisions) were weighted by client days.

Stage 5: Calculate indicators for 2021/22

- **a.** Business financial indicators are disaggregated by region, return on investment, business model, and main trip length.
- **b.** Fishery economic indicators are reported at the fishery level as well as disaggregated by fishing region, business model, main trip length and return on investment.
- c. Economic contribution indicators are reported for Queensland and for each of the coastal regions (Figure 1-1) with each business attributed to the region of their 'main port' as provided in the survey.
- d. Social indicators are reported unweighted and at the fishery level.

2.2. Survey of fishing businesses 2021/22

The survey of charter fishing businesses to collect information on the 2021/22 financial year was undertaken between November 2023 and February 2024. The survey involved collecting data from charter fishing businesses on trip types and prices, operating costs, employment (including unpaid), capital value and depreciation, social and demographic information. The survey was based on a questionnaire developed in collaboration with Fisheries Queensland and with industry representatives for the previous 2019/20 survey. The questionnaire was refined for the 2021/22 survey. Businesses were asked to only include the amounts that were attributable to their Queensland charter fishing business. If exact figures were not available (e.g. from a tax return), then they were asked to provide careful estimates.

Businesses were invited to participate through multiple email and phone call invitations as well as through the endorsement of various industry groups. They were invited to respond through an online form or over the phone. Most responses were provided over the phone.

The confidentiality of responses was made clear to respondents including that no individual response would be identifiable in reporting or provided to Fisheries Queensland and that any statistic published would be based on at least five responses. This 'five business rule' is commonly used to maintain confidentiality when reporting professional fishing statistics, including by Fisheries Queensland.

The 2021/22 survey received a total of 23 usable responses. The responses represented 20 per cent of the estimated population of active charter operators in 2021/22. More active businesses (those with a higher number of client days) are better represented than less active businesses in the sample. Approximately three quarters of survey respondents were within the most active half of businesses within the population of charter operators (Table 2-1). This sample was sufficient to prepare the economic indicators with the regional and activity based disaggregations that follow in this report. The population and sample size in each disaggregation appears in the same table as the results to illustrate the representativeness of each.

The refusal rate for participating in the survey was higher than expected. Of the active charter businesses contacted, 47 per cent refused to participate in the survey. Reasons for refusal included being too busy, mistrust of and unwillingness to support Fisheries Queensland, recent business closure or sale, and lack of interest in the study. The previous Charter Sector business survey in 2019/20 also included businesses that operated in 2019/20 but reported no activity to Fisheries Queensland. Only businesses that reported Charter Sector activity to Fisheries Queensland in 2021/22 were included in the 2021/22 survey sample. The refusal rate combined with the smaller sampling frame resulted in a notably smaller sample size than the most recent detailed business survey in 2019/20. The 2019/20 survey had 55 responses, representing 37 per cent of the population.

	Active b	ousinesses (no.)	Proportion of	Proportion of
	Population	Sample	active businesses in sample	GVP represented by the sample ^a
Fishing region				
Gulf of Carpentaria and Far North	17	3	18%	82%
Cairns	16	7	44%	76%
Townsville	7	1	14%	13%
Mackay, Isaac and Whitsunday	20	3	15%	11%
Central Queensland	20	3	15%	5%
Wide Bay	11	2	18%	12%
South East Queensland	23	4	17%	4%
Client days quartiles				
0 to 94 client days	29	2	7%	
65 to 324 client days	28	4	14%	
325 to 879 client days	28	11	39%	
879 to 3,700 client days	29	6	21%	
Queensland	114	23	20%	25%

Table 2-1 2021/22 survey sample in the Charter Sector, by main region and client days quartiles

^a Not reported for days fished groups as population level GVP is unknown for these categories.

Source: Fisheries Queensland and BDO EconSearch analysis

2.3. Business model definitions

To report financial indicators for different types of businesses, Charter Sector business models were selected collaboratively between Fisheries Queensland, Charter Sector representatives and BDO EconSearch. Survey participants were grouped into these business models based on their identification in the survey of the most important model to them. The business models used to categorise businesses in the Charter Sector are defined as:

- 1. Game fishing is fishing to catch large open-water species such as tuna, marlin and shark.
- 2. Sport fishing is fishing for specific targeted species (other than tuna, marlin and shark) in any body of water. It includes freshwater and saltwater fly fishing.
- 3. Coral reef is bottom fishing, primarily around coral reef habitats for coral reef fish.
- 4. Rocky reef is bottom fishing, primarily in South East Queensland, for rocky reef fish.
- 5. Inshore includes fishing in estuary, rivers, freshwater and impoundments.

Business financial indicators for the sample of active businesses are presented in Section 3.4.2 by business model group. Survey respondents selected the most important business model to them based on a list of names of business models without the context provided by a definition. The groupings therefore reflect the survey participants' interpretations of the business model names.

To maintain confidentiality of survey respondents, some business models have been combined and the resulting groups are reported:

- Game and Sport fishing
- Coral reef, Rocky reef and Inshore.

3. Economic indicators for the Queensland Charter Sector

3.1. Client, gross value of production and exports

The total number of client days in the Charter Sector decreased from approximately 132,000 in 2017/18 to just under 82,000 in 2021/22, a decline of 38 per cent (Table 3-1). Consequently, Charter Sector GVP declined by 29 per cent between 2017/18 (\$35.8m) and 2021/22 (\$25.3m). The lowest year for the period was 2019/20, with just under 75,000 client days and \$24.6m in GVP. This was primarily due to the impact of the COVID-19 pandemic and lockdowns preventing or discouraging travel throughout the 2019/20 financial year. The value of exports³ accounted for approximately 17 per cent of GVP in 2017/18 but declined to 5 per cent in 2021/22 (Table 3-1).

	2017/18	2018/19	2019/20	2020/21	2021/22
Client days (no.)	132,276	120,331	74,919	89,037	81,577
GVP (\$m)	35.8	33.1	24.6	30.9	25.3
Export value (\$m)	5.9	5.4	1.2	0.4	1.4

Table 3-1 Clients, GVP and export value of the Charter Sector, 2017/18 to 2021/22

Source: Fisheries Queensland, BDO EconSearch 2023 and 2021/22 survey

3.2. Prices and customers

Average price (per client day) increased from \$271 in 2017/18 to \$310 in 2021/22 and varied across business model and main trip length of operator (Table 3-2 and Table 3-3).

By business model, the price per client day in 2021/22 was lower for game and sport fishing focused businesses (\$250) than for coral reef, rocky reef and inshore fishing focused businesses (\$373). By main trip length, operators focused on day trips had a slightly higher average price per client day (\$311/day) than multi-day focused operators (\$304/day) (Table 3-3).

The most significant market for the Charter Sector in 2021/22 was Australia. Surveyed businesses reported that 95 per cent of customers were domestic compared to 99 per cent in 2020/21, and 83 per cent in 2017/18. By business model, international customers spent more on game and sport fishing focused businesses (8 per cent) than on rocky reef, coral reef, and inshore fishing focused operators (3 per cent) in 2021/22. International customers spent equally on multi-day focused operators and single day operators (5 per cent each) (Table 3-3).

Table 3-2	Price and c	ustomers for	Charter Sector.	2017/18 to 2021/22
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	2017/18	2018/19	2019/20	2020/21	2021/22
Price (\$/client/day)	270.75	274.89	328.96	347.15	309.96
Domestic Customers (%)	83%	84%	95%	99 %	95%
International Customers (%)	17%	16%	5%	1%	5%

Source: BDO EconSearch 2023 and 2021/22 survey

³ Exports were estimated by applying each fishing business's estimate of the total proportion of their customers that are international visitors to their total revenue.

Table 3-3 Client days, price, GVP and customers for Charter Sector, 2021/22

		Price	GVP	Customers	
Region	Client days	(\$ per client per day)	(\$m)	Domestic (%)	International (%)
Fishing region					
Gulf of Carpentaria and Far North, Cairns and Townsville	21,448	396.60	8.5	97 %	3%
Mackay, Isaac & Whitsunday and Central Queensland	36,827	295.75	10.9	92 %	8%
Wide Bay and South East Queensland	23,302	252.65	5.9	94 %	6%
Business model					
Game and Sport fishing	42,018	250.24	10.5	92 %	8%
Coral reef, Rocky reef and Inshore ^a	39,559	373.38	14.8	97 %	3%
Main trip length					
Multi-day & live aboard (>24hrs)	8,643	303.82	2.6	9 5%	5%
Day trips (<24hrs)	72,934	310.68	22.7	95 %	5%
Queensland	81,577	309.96	25.3	95%	5%

^a Includes estuary, rivers, freshwater and impoundments.

Source: BDO EconSearch analysis

3.3. Cost of management

The costs incurred by Fisheries Queensland in managing Queensland's fisheries is not equal to the administration fees or licence fees charged by Fisheries Queensland to the fishing businesses. This section discusses the costs incurred by Fisheries Queensland and not the administration and licence fees charged by Fisheries Queensland to fishing businesses.

While the total cost of managing Queensland's commercial fisheries is known, the precise cost of managing each individual fishery and sector is difficult to determine. This is because the costs of activities such as fishery monitoring, assessment, management and compliance overlap several fisheries. For example, a single fishery monitoring activity can collect information for several fisheries which in turn inputs into the management of several different fisheries. Allocating the costs of managing fisheries requires a degree of subjective assessment based on the benefits derived by the individual fisheries from those activities. The costs of managing the commercial sector for each fishery/sector were provided to BDO EconSearch by Fisheries Queensland. Costs were allocated to the fisheries based on the cost being incurred to enable the management of the fishery/sector and then proportionally attributed to the respective sectors based on the benefits of management to the fishery/sector. This was done for the purpose of developing economic indicators and should not be relied upon for any other purpose.

Estimated total management costs, as detailed in Table 3-4, for the Charter Sector were \$1.5m in 2021/22, a gradual increase from \$1.2m in 2017/18. These costs were incurred while delivering the following services:

- policy and management services
- regulatory/legislation and licensing services
- compliance services

- directorate services
- fishery monitoring and research services.

As a proportion of GVP total management costs were 3.3 per cent in 2017/18 and 6.0 per cent in 2021/22. The overall increase in management costs as a proportion of GVP between 2017/18 and 2021/22 is due to the slight increase in management costs and decline in GVP (Table 3-4).

As a proportion of total gross state product, management costs were 2.2 per cent in 2017/18 and 4.9 per cent in 2021/22. The overall increase in management costs as a proportion of gross state product between 2017/18 and 2021/22 is due to the slight increase in management costs and decline in gross state product (Table 3-4).

	2017/18	2018/19	2019/20	2020/21	2021/22
Management costs (\$m)	1.2	1.2	1.4	1.4	1.5
GVP (\$m)	35.8	33.1	24.6	30.9	25.3
Management costs/GVP (%)	3.3%	3.6%	5.8%	4.5%	6.0%
Gross state product (direct + flow-on) (\$m)	53.1	50.3	33.5	40.0	31.0
Management costs/gross state product (%)	2.2%	2.4%	4.3%	3.5%	4.9%

Table 3-4 Costs of management in the Charter Sector, 2017/18 to 2021/22

Source: Fisheries Queensland, BDO EconSearch 2023 and 2021/22 survey

3.4. Business financial indicators

The major measures of the financial performance of active businesses in the Charter Sector for the financial years 2017/18 to 2021/22 are presented in Section 3.4.1. The estimates for 2017/18 to 2020/21 were developed from previous surveys (BDO EconSearch 2023). The estimates for 2021/22 were developed from the 2021/22 survey. Sample sizes used for each year are also outlined in the tables throughout the section. The weights applied to the survey data aim to generate reliable estimates at the scale of the fishery/sector, or average business. Average financial performance masks significant variation across types of businesses and their activities. To describe this variation, the same indicators are presented in Section 3.4.2 with the sector disaggregated by return on investment quartile, business model, main trip length and main fishing region.

3.4.1. Sector average between 2017/18 and 2021/22

Business financial indicators are presented for average business and total activity in the Charter Sector for the 2020/21 and 2021/22 financial years in Table 3-5, the 2018/19 and 2019/20 financial years in Table 3-6, and the 2017/18 financial year in Table 3-7. This section summarises the key points from Table 3-5.

Income

The average gross income per business in the Charter Sector was estimated to be \$222,000 in both 2021/22 and 2020/21. Between 2020/21 and 2021/22, client days for the average business increased while gross income remained stable due to lower prices in 2021/22 than in 2020/21 (see Section 3.2).

Costs

Total costs are separated into variable costs and fixed costs. In 2021/22, total variable costs (62 per cent of total costs) was higher than total fixed costs (38 per cent of total costs). Variable costs as a proportion

of total costs increased from 46 per cent in 2020/21 to 62 per cent in 2021/22. This was primarily driven by an increase in the variable cost items fuel and paid labour, and a decrease in the fixed cost item repairs and maintenance.

Average total costs remained stable between 2020/21 and 2021/22 at \$162,000 with a shift to higher variable costs offset by lower fixed costs. In 2021/22, for the sector as a whole, around 29 per cent of the total costs were attributable to labour (both paid and imputed), which was the largest cost item. Imputed unpaid labour (\$10,000) was divided into variable costs (fishing and repairs and maintenance) of \$2,500 and fixed costs (management and administration) of \$7,500, based on survey data. Other significant costs were fuel (27 per cent of total costs) and fixed and variable repairs and maintenance (12 per cent of total costs).

Licence fees are reported by respondents to the survey and include fees for other licences that respondents hold in addition to the Fisheries Queensland licence to undertake charter fishing operations. At the time of writing, Fisheries Queensland charged a \$367.66 fee per year for a charter fishing licence (Business Queensland 2024).

Income and Profit

Gross margin is calculated as gross income less total variable costs and is a basic measure of profit. Gross margin was \$121,000 in 2021/22 and almost \$148,000 in 2020/21, an 18 per cent decrease due to an increase in variable costs.

Gross operating surplus is calculated as gross income less total costs (excluding imputed wages for operator and family members as a cost item). This measure of profit gives an indication of the capacity of the operator to remain in the sector in the short term as unpaid labour does not affect business cash flow in the short term. Gross operating surplus was \$69,500 in 2021/22 and \$70,500 in 2020/21, a small decrease of 2 per cent. This was due to consistent revenue and total costs between years.

Business profit before depreciation is calculated as gross income less total costs (including imputed wages). Business profit before depreciation remained stable at \$60,000 in both 2021/22 and 2020/21. Positive business profit before depreciation indicates that the average fishing business earned enough income to cover its costs and the imputed cost of unpaid labour used to operate the business.

Business profit is calculated as gross income less total costs (including imputed wages) and less depreciation. This represents a more complete picture of the actual financial status of an individual firm and their capacity to remain in the sector in the long term as a positive business profit is required to pay imputed wages and replace capital at the rate it depreciates. Business profit was almost \$49,000 in 2021/22, a 56 per cent increase from \$31,000 in 2020/21. This was due to a 62 per cent decline in the cost of depreciation between 2021/22 (\$11,000) and 2020/21 (\$29,000). Therefore, sufficient income was earned by the average business to cover the imputed cost of labour and depreciation of capital in 2021/22.

Profit at full equity is a measure of the profitability of an individual fishing business, assuming the business has full equity in their operation (i.e. it excludes interest and borrowing costs). It is a useful absolute measure of the economic performance of firms. Profit at full equity was \$52,000, a 46 per cent increase from \$35,000 in 2020/21.

Return to capital at full equity

There are a number of interpretations of return to capital at full equity. For the purpose of this analysis it is appropriate to consider the capital employed by an average business in the sector, that is total capital at full equity for this sector. Capital includes boats, fishing gear, sheds, vehicles and other capital items used as part of the fishing enterprise. It does not include capital associated with non-fishing activities undertaken

by the business. The average rate of return on total capital at full equity was 10.4 per cent in 2021/22, an improvement from 2020/21 (5.0 per cent).

Summary

In 2021/22, the average business' activity in the Charter Sector generated a positive gross operating surplus (\$69,500) and profit at full equity (\$52,000), leading to a return on investment at full equity of 10.4 per cent. This means the average business earned enough income to cover its costs, the imputed cost of unpaid labour used to operate the business, and the cost of capital depreciation. While both revenue and total costs for the average business remained consistent between 2020/21 and 2021/22, overall profitability increased due to a reduction in working capital and depreciation per business. This may be due to sampling variability between years, or it may point to broader changes in the charter business operations, or a combination of the two. For example, it may be that after facing difficulties and a decline in profitability during the COVID-19 period, businesses reduced the amount of capital invested in their business operations, or that the more heavily invested businesses exited the industry.

			2020/21			2021/22	
		Average per Business	Total for the Sector	%	Average per Business	Total for the Sector	9
	Charter Businesses						
	Active Businesses (no.)	139	139		114	114	
	Sample Size (n)	52	52		23	23	
	Charter Activity						
	Trip days (no.)	74	10,353		75	8,582	
	Client days (no.)	641	89,037		716	81,577	
	Employment						
	FTE Jobs	0.9	123		1.1	129	
	Total Jobs	1.9	266		2.0	230	
1)	Gross Income	\$222,367	\$30,908,975		\$221,801	\$25,285,299	
	Variable costs						
	Fuel	\$23,180	\$3,221,984	14%	\$43,914	\$5,006,210	27
	lce & Bait	\$4,862	\$675,865	3%	\$6,158	\$702,013	4
	Fishing tackle	\$3,469	\$482,173	2%	\$4,391	\$500,579	3
	Provisions	\$15,275	\$2,123,243	9 %	\$7,311	\$833,508	5
	Labour - paid	\$16,729	\$2,325,311	10%	\$26,009	\$2,965,026	16
2)	Labour - unpaid	\$5,356	\$744,454	3%	\$2,419	\$275,770	1
	Repairs and maintenance	\$5,584	\$776,227	3%	\$10,441	\$1,190,321	6
3)	Total Variable Costs	\$74,455	\$10,349,258	46%	\$100,644	\$11,473,428	62
-,	Fixed costs	<i></i>	<i></i>	10,0	<i></i>	<i>•••••••••••••••••••••••••••••••••••••</i>	02
	Licence Fee	\$321	\$44,559	0%	\$1,756	\$200,190	1
	Repairs and maintenance	\$26,769	\$3,720,885	17%	\$9,642	\$1,099,221	e
	Insurance	\$10,925	\$1,518,562	7%	\$9,121	\$1,039,813	6
4)	Interest	\$2,863	\$397,981	2%	\$768	\$87,504	(
.,	Labour - paid	\$9,940	\$1,381,610	<u> </u>	\$11,445	\$1,304,751	7
5)	Labour - unpaid	\$5,091	\$707,656	3%	\$7,408	\$844,541	5
	•	\$2,870	\$398,863	2%	\$4,629	\$527,738	
6)	Leasing and rent	\$2,870		0%	\$4,029		3
	Rates		\$111,372			\$36,784	C
	Power	\$1,004	\$139,538	1%	\$979	\$111,599	1
	Communications	\$2,393	\$332,643	1%	\$1,970	\$224,601	1
	Legal & Accounting	\$2,587	\$359,606	2%	\$1,517	\$172,933	1
	Slipping, Mooring & survey	\$7,099	\$986,697	4%	\$5,737	\$654,009	4
	Travel	\$942	\$130,925	1%	\$696	\$79,346	(
	Protective clothing & Uniforms	\$894	\$124,249	1%	\$941	\$107,295	1
	Membership, Assoc. expenses	\$418	\$58,145	0%	\$219	\$25,015	(
	Advertising	\$5,213	\$724,568	3%	\$3,072	\$350,256	2
	Other	\$7,591	\$1,055,147	5%	\$1,232	\$140,462	1
7)	Total Fixed Costs	\$87,719	\$12,193,006	54%	\$61,457	\$7,006,058	38
8)	Total Costs (3+7)	\$162,175	\$22,542,264	100%	\$162,101	\$18,479,486	100
	Gross Margin (1-3)	\$147,912	\$20,559,718		\$121,157	\$13,811,871	
9)	Total Unpaid Labour (2+5)	\$10,447	\$1,452,110		\$9,827	\$1,120,311	
	Gross Operating Surplus (1-8+9)	\$70,639	\$9,818,821		\$69,527	\$7,926,125	
10)	Business Profit before Depreciation (1-8)	\$60,192	\$8,366,711		\$59,700	\$6,805,814	
11)	Depreciation	\$29,073	\$4,041,080		\$11,110	\$1,266,508	
12)	Business Profit (10-11)	\$31,120	\$4,325,631		\$48,590	\$5,539,306	
13)	Profit at Full Equity ^b (12+4+6 ^a)	\$35,418	\$4,923,043		\$51,673	\$5,890,679	
	Fishing Gear and Equipment ^c	\$703,964	\$97,851,029		\$496,803	\$56,635,568	
14)	Rate of Return on Fishing Gear and	\$703,964	\$97,851,029		\$496,803	\$56,635,568	

Table 3-5Financial performance in the Charter Sector, 2020/21 and 2021/22

^a Part of leasing and rent is assumed to cover depreciation of buildings and equipment so is excluded from profit at full equity.

^b The capital values in the calculation of Profit at Full Equity include the capitalised value of leased equipment (6). They are therefore larger than the capital values stated in the table.

^c Includes items such as boats, boat and fishing gear, electronic equipment, trailers, buildings and motor vehicles.

Source: BDO EconSearch 2023 and 2021/22 survey

			2018/19			2019/20	
		Average per Business	Total for the Sector	%	Average per Business	Total for the Sector	%
	Charter Businesses						
	Active Businesses (no.)	176	176		149	149	
	Sample Size (n)	92	92		52	52	
	Charter Activity						
	Trip days (no.)	80	14,081		60	8,953	
	Client days (no.)	684	120,331		503	74,919	
	Employment						
	FTE Jobs	1.0	177		0.8	115	
	Total Jobs	2.0	354		1.6	245	
(1)	Gross Income	\$187,945	\$33,078,369		\$165,406	\$24,645,444	
	Variable costs						
	Fuel	\$25,369	\$4,464,860	14%	\$18,054	\$2,690,112	13%
	lce & Bait	\$6,317	\$1,111,799	3%	\$3,583	\$533,798	3%
	Fishing tackle	\$2,928	\$515,407	2%	\$2,549	\$379,769	2%
	Provisions	\$12,314	\$2,167,344	7%	\$11,637	\$1,733,903	9%
	Labour - paid	\$17,867	\$3,144,664	10%	\$13,228	\$1,971,021	10%
(2)	Labour - unpaid	\$12,194	\$2,146,231	7%	\$4,415	\$657,769	3%
	Repairs and maintenance	-	n.a	-	\$4,465	\$665,239	3%
(3)	Total Variable Costs	\$76,990	\$13,550,304	43%	\$57,930	\$8,631,611	43%
. ,	Fixed costs						
	Licence Fee	\$1,107	\$194,878	1%	\$300	\$44,703	0%
	Repairs and maintenance	\$30,909	\$5,440,044	17%	\$19,142	\$2,852,130	14%
	Insurance	\$8,770	\$1,543,484	5%	\$10,361	\$1,543,795	8%
(4)	Interest	\$4,859	\$855,116	3%	\$3,241	\$482,959	2%
()	Labour - paid	\$10,442	\$1,837,846	6%	\$9,739	\$1,451,167	7%
(5)	Labour - unpaid	\$15,900	\$2,798,342	9%	\$4,944	\$736,706	4%
(6)	Leasing and rent	\$5,961	\$1,049,136	3%	\$2,742	\$408,583	2%
< <i>/</i>	Rates	\$816	\$143,689	0%	\$690	\$102,861	1%
	Power	\$1,111	\$195,581	1%	\$991	\$147,594	1%
	Communications	\$2,521	\$443,636	1%	\$2,310	\$344,163	2%
	Legal & Accounting	\$2,624	\$461,830	1%	\$2,468	\$367,684	2%
	Slipping, Mooring & survey	\$11,580	\$2,038,029	6%	\$6,901	\$1,028,286	5%
	Travel	\$1,100	\$193,647	1%	\$924	\$137,639	1%
	Protective clothing & Uniforms	\$1,196	\$210,462	1%	\$868	\$129,276	1%
	Membership, Assoc. expenses	\$360	\$63,430	0%	\$393	\$58,556	0%
	Advertising	\$3,622	\$637,540	2%	\$5,016	\$747,344	4%
	Other	\$641	\$112,861	0%	\$7,106	\$1,058,737	5%
(7)	Total Fixed Costs	\$103,520	\$18,219,552	57%	\$78,135	\$11,642,184	57%
(8)	Total Costs (3+7)	\$180,511	\$31,769,856	100%	\$136,066	\$20,273,795	100%
< /	Gross Margin (1-3)	\$110,955	\$19,528,065	100/0	\$107,475	\$16,013,833	100/0
(9)	Total Unpaid Labour (2+5)	\$28,094	\$4,944,572		\$9,359	\$1,394,475	
(-)	Gross Operating Surplus (1-8+9)	\$35,529	\$6,253,085		\$38,699	\$5,766,124	
(10)	Business Profit before Depreciation (1-8)	\$7,435	\$1,308,513		\$29,340	\$4,371,649	
(11)	Depreciation	\$32,765	\$5,766,609		\$28,131	\$4,191,571	
(12)	Business Profit (10-11)	-\$25,330	-\$4,458,096		\$1,209	\$180,078	
(13)	Profit at Full Equity ^b (12+4+6 ^a)	-\$17,491	-\$3,078,411		\$5,821	\$867,328	
(14)	Fishing Gear and Equipment ^c	\$593,297	\$104,420,286		\$684,736	\$102,025,647	
	Rate of Return on Fishing Gear and Equipment at Full Equity (13/14*100)	-2.9%	-2.9%		0.9%	0.9%	

Table 3-6 Financial performance in the Charter Sector, 2018/19 and 2019/20

^{a-c} Refer to Table 3-5.

Source: BDO EconSearch 2023

			2017/18	
		Average per Business	Total for the Sector	%
	Charter Businesses			
	Active Businesses (no.)	180	180	
	Sample Size (n)	92	92	
	Charter Activity			
	Trip days (no.)	85	15,255	
	Client days (no.)	735	132,276	
	Employment			
	FTE Jobs	1.0	188	
	Total Jobs	2.1	377	
(1)	Gross Income	\$199,049	\$35,813,264	
. ,	Variable costs			
	Fuel	\$25,315	\$4,554,821	14%
	lce & Bait	\$6,300	\$1,133,471	4%
	Fishing tackle	\$3,070	\$552,366	2%
	Provisions	\$11,985	\$2,156,426	7%
	Labour - paid	\$18,094	\$3,255,555	10%
(2)	Labour - unpaid	\$12,348	\$2,221,647	7%
(-)	Repairs and maintenance	-	n.a	
(3)	Total Variable Costs	\$77,113	\$13,874,285	43%
(0)	Fixed costs	<i>ų,,,</i> ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	<i>Q10,011,200</i>	10,0
	Licence Fee	\$1,072	\$192,961	1%
	Repairs and maintenance	\$30,162	\$5,426,850	17%
	Insurance	\$8,565	\$1,541,056	5%
(4)	Interest	\$4,837	\$870,276	3%
(')	Labour - paid	\$10,174	\$1,830,502	6%
(5)	Labour - unpaid	\$15,299	\$2,752,648	9%
(6)	Leasing and rent	\$5,773	\$1,038,703	3%
(0)	Rates	\$878	\$157,914	0%
	Power	\$1,134	\$204,022	1%
	Communications	\$1,134	\$432,944	12
	Legal & Accounting	\$2,524	\$454,158	1%
	Slipping, Mooring & survey	\$11,213	\$2,017,472	6%
	Travel	\$1,106	\$198,951	1%
	Protective clothing & Uniforms	\$1,200	\$215,941	1%
	5	\$351	. ,	0%
	Membership, Assoc. expenses	\$3,580	\$63,074 \$644,160	2%
	Advertising Other	\$643		0%
(7)			\$115,643	
(7)	Total Fixed Costs	\$100,917	\$18,157,275	57%
(8)	Total Costs (3+7)	\$178,030	\$32,031,560	100%
(0)	Gross Margin (1-3)	\$121,936	\$21,938,979	
(9)	Total Unpaid Labour (2+5)	\$27,647	\$4,974,296	
(10)	Gross Operating Surplus (1-8+9)	\$48,665	\$8,756,000	
(10)	Business Profit before Depreciation (1-8)	\$21,019	\$3,781,704	
(11)	Depreciation	\$31,984	\$5,754,686	
(12)	Business Profit (10-11)	-\$10,966	-\$1,972,982	
(13)	Profit at Full Equity ^b (12+4+6 ^a)	-\$3,242	-\$583,354	
(14)	Fishing Gear and Equipment ^c	\$569,406	\$102,448,891	
	Rate of Return on Fishing Gear and Equipment at Full Equity (13/14*100)	-0.6%	-0.6%	

Table 3-7Financial performance in the Charter Sector, 2017/18

Source: BDO EconSearch 2023

3.4.2. Disaggregation of business financial indicators for 2021/22

The tables in this section present financial indicators for the population of active businesses in the Charter Sector. Results are disaggregated across various dimensions: return on investment quartile, business model, main trip length and main fishing region. Grouping businesses in different ways and comparing the financial indicators between groups provides insight into the relationships between business characteristics and financial performance. The tables disaggregate the same weighted sample as appears in Section 3.4.1.

Return on investment quartiles

Business financial indicators are presented in Table 3-8 for the sample of active businesses split into quarters of approximately equal size based on return on investment in 2021/22. This provides insight into the differences between the most and least profitable businesses such as cost relative to income, itemised cost amounts, capital utilised, scale of operation, etc.

The top two quartiles have a positive profit at full equity on average and a positive return on investment, and the bottom two quartiles a have negative profit at full equity on average and a negative return on investment. The top quartile is characterised by being more active than average and having more revenue as a consequence, but also having low variable and fixed cost and using less capital.

Employment (fte) quartiles

Business financial indicators are presented in Table 3-9 for the sample of active businesses split into quarters of approximately equal size based on the size of employment (fte) in 2021/22. This provides insight into the differences in cost structures and profitability of different scales of businesses in the sector.

The top two quartiles had the most positive profit at full equity and return on investment, suggesting that the most profitable businesses in 2021/22 tended to be those that were larger and worked more often. The group of small operators working very infrequently (the bottom quartile) tended to be marginally profitable and the group of small, but slightly larger businesses (the second quartile) tended to be marginally unprofitable. The top quartile is characterised by being more active than average and having more revenue as a consequence, but also having lower costs relative to revenue, which resulted in higher overall profitability.

Business model

Business financial indicators are presented in Table 3-10 for the sample of active businesses split into two business model groups (1. Game and sport fishing, and 2. Coral reef, rocky reef and inshore fishing). Businesses were divided into business models based on their identification of the most important model to their business in the survey. See Section 2.3 for definitions of each business model.

In 2021/22, the game and sport fishing focused businesses were more profitable (24.2 per cent return on investment) than rocky reef, coral reef, and inshore fishing focused operators (3.9 per cent return on investment).

Main trip length

Business financial indicators are presented in Table 3-11 for the population of active businesses in this sector split into groups that focus more on day trips or multi-day trips. Businesses were divided into these groups based on their identification of the most important trip type to their business in the survey.

In 2021/22, return on investment including endorsement value was positive for businesses that focus on day trips (19.6 per cent) and negative for those that focus on multi-day trips (-8.0 per cent).

Fishing regions

Business financial indicators are presented in Table 3-12 by main fishing region. Each business was allocated to the region of their 'main port' as provided in the survey.

Return on investment varied widely across regions in 2021/22 from 28.1 percent in the Mackay, Isaac & Whitsunday and Central Queensland region to -3.7 per cent in the Gulf of Carpentaria and Far North, Cairns and Townsville region. The higher profitability region in 2021/22 (Mackay, Isaac & Whitsunday and Central Queensland) was characterised by low fixed cost operations when compared to the state average.

			Aver	age per Busin	ess	
		Lowest 25%	Second Quartile	Third Quartile	Highest 25%	All Businesses
	Charter Businesses					
	Active Businesses (no.)	25	22	36	31	114
	Sample Size (n)	6	6	6	5	23
	Charter Activity					
	Trip days (no.)	63	58	86	84	75
	Client days (no.)	580	431	729	1,004	716
	Employment					
	FTE Jobs	0.9	1.3	0.3	2.1	1.1
	Total Jobs	1.1	1.9	1.4	3.6	2.0
(1)	Gross Income	\$141,971	\$154,553	\$146,717	\$418,280	\$221,80 [°]
` '	Variable costs	. ,	. ,	. ,	. ,	. ,
	Fuel	\$38,762	\$29,766	\$36,385	\$66,440	\$43,914
	Ice & Bait	\$8,987	\$6,009	\$4,407	\$6,030	\$6,158
	Fishing tackle	\$4,542	\$5,414	\$2,325	\$5,951	\$4,391
	Provisions	\$14,075	\$8,224	\$502	\$9,159	\$7,31 ²
	Labour - paid	\$24,240	\$28,337	\$5,697	\$49,260	\$26,00
(2)	Labour - unpaid	\$5,741	\$3,271	\$849	\$1,001	\$2,41
(∠)	Repairs and maintenance	\$10,389	\$9,182	\$5,534	\$17,014	\$10,44
(3)	Total Variable Costs	\$106,736	\$90,203	\$55,700	\$154,856	\$100,64
(3)	Fixed costs	\$100,730	\$90,203	\$33,700	\$154,850	\$100,04
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	Licence Fee	\$6,076	\$445	\$621	\$530	\$1,75
	Repairs and maintenance	\$9,291	\$16,611	\$7,165	\$7,987	\$9,64
(4)	Insurance	\$9,538	\$20,339	\$2,712	\$8,469	\$9,12
(4)	Interest	\$403	\$2,317	\$0	\$878	\$76
	Labour - paid	\$12,394	\$14,710	\$3,093	\$18,084	\$11,44
(5)	Labour - unpaid	\$18,020	\$12,149	\$846	\$3,274	\$7,40
(6)	Leasing and rent	\$1,100	\$7,845	\$6,724	\$2,809	\$4,62
	Rates	\$496	\$374	\$117	\$386	\$32
	Power	\$959	\$3,010	\$117	\$591	\$97
	Communications	\$1,775	\$5,691	\$964	\$727	\$1,97
	Legal & Accounting	\$1,545	\$2,864	\$682	\$1,532	\$1,51
	Slipping, Mooring & survey	\$6,545	\$19,641	\$318	\$1,782	\$5,73
	Travel	\$952	\$1,696	\$194	\$383	\$69
	Protective clothing & Uniforms	\$606	\$2,448	\$282	\$933	\$94
	Membership, Assoc. expenses	\$527	\$244	\$81	\$117	\$21
	Advertising	\$3,978	\$3,914	\$4,461	\$170	\$3,072
	Other	\$802	\$305	\$240	\$3,357	\$1,23
(7)	Total Fixed Costs	\$75,006	\$114,604	\$28,617	\$52,009	\$61,45
(8)	Total Costs (3+7)	\$181,742	\$204,807	\$84,317	\$206,865	\$162,10
	Gross Margin (1-3)	\$35,235	\$64,350	\$91,017	\$263,424	\$121,15
(9)	Total Unpaid Labour (2+5)	\$23,761	\$15,420	\$1,695	\$4,275	\$9,82
, ,	Gross Operating Surplus (1-8+9)	-\$16,010	-\$34,833	\$64,095	\$215,691	\$69,52
0)	Business Profit before Depreciation (1-8)	-\$39,771	-\$50,253	\$62,400	\$211,416	\$59,70
1)	Depreciation	\$9,563	\$17,441	\$9,003	\$10,416	\$11,11
12)	Business Profit (10-11)	-\$49,334	-\$67,694	\$53,397	\$200,999	\$48,59
13)	Profit at Full Equity (12+4+6 ^a)	-\$48,381	-\$61,455	\$56,759	\$203,281	\$51,67
4)	Fishing Gear and Equipment	\$361,973	\$979,934	\$451,052	\$324,505	\$496,80
(ד	Rate of Return on Fishing Gear and Equipment at Full Equity	-13.4%	-6.3%	12.6%	62.6%	10.49
	(13/14*100)					

Table 3-8Financial performance in the Charter Sector, by return on investment quartile, 2021/22

^a Part of leasing and rent is assumed to cover depreciation of buildings and equipment so is excluded from profit at full equity. Source: 2021/22 survey

			Aver	age per Busin	ess	
		Lowest 25%	Second Quartile	Third Quartile	Highest 25%	All Businesses
	Charter Businesses		Quartite	Quartite		Dusinesses
	Active Businesses (no.)	28	33	28	25	114
	Sample Size (n)	6	6	6	5	23
	Charter Activity	Ū	Ū	0	5	25
	Trip days (no.)	42	72	88	103	75
	Client days (no.)	198	578	938	1,238	716
	Employment	170	570	750	1,230	/10
	FTE Jobs	0.1	0.4	1.2	3.1	1.1
		0.7	1.1	2.6	4.1	2.0
(1)	Total Jobs Gross Income	\$50,652	\$98,946	\$276,520	\$516,830	\$221,801
(1)		300,002	390,940	\$276,520	\$210,030	3221,001
	Variable costs	640 44F	624.004	¢ 40, 400	¢00.407	¢ 42, 04,4
	Fuel	\$12,615	\$24,996	\$48,600	\$99,187	\$43,914
	Ice & Bait	\$881	\$4,096	\$10,106	\$10,447	\$6,158
	Fishing tackle	\$2,805	\$2,344	\$5,407	\$7,747	\$4,391
	Provisions	\$1,233	\$2,541	\$5,254	\$22,821	\$7,311
	Labour - paid	\$0	\$7,451	\$31,589	\$73,771	\$26,009
(2)	Labour - unpaid	\$1,508	\$2,919	\$1,230	\$4,138	\$2,419
	Repairs and maintenance	\$2,443	\$5,981	\$12,832	\$22,735	\$10,441
(3)	Total Variable Costs	\$21,484	\$50,328	\$115,017	\$240,846	\$100,644
	Fixed costs					
	Licence Fee	\$385	\$348	\$6,123	\$261	\$1,756
	Repairs and maintenance	\$5,574	\$7,850	\$9,924	\$16,319	\$9,642
	Insurance	\$2,301	\$7,692	\$10,162	\$17,608	\$9,121
(4)	Interest	\$1,316	\$308	\$983	\$505	\$768
	Labour - paid	\$0	\$3,069	\$16,085	\$30,283	\$11,445
(5)	Labour - unpaid	\$1,817	\$15,448	\$6,055	\$4,749	\$7,408
(6)	Leasing and rent	\$5,403	\$2,743	\$5,431	\$5,323	\$4,629
	Rates	\$105	\$559	\$555	\$0	\$323
	Power	\$262	\$673	\$1,111	\$2,050	\$979
	Communications	\$1,535	\$1,480	\$1,442	\$3,704	\$1,970
	Legal & Accounting	\$667	\$1,036	\$1,229	\$3,442	\$1,517
	Slipping, Mooring & survey	\$304	\$1,511	\$6,265	\$16,889	\$5,737
	Travel	\$396	\$178	\$490	\$1,950	\$696
	Protective clothing & Uniforms	\$252	\$702	\$947	\$2,034	\$941
	Membership, Assoc. expenses	\$61	\$37	\$209	\$652	\$219
	Advertising	\$498	\$6,718	\$1,905	\$2,533	\$3,072
	Other	\$157	\$172	\$1,289	\$3,786	\$1,232
(7)	Total Fixed Costs	\$21,032	\$50,523	\$70,205	\$112,088	\$61,457
	Total Costs (3+7)	\$42,516	\$100,851	\$185,222	\$352,935	\$162,101
(8)				\$165,222	\$275,984	
(0)	Gross Margin (1-3)	\$29,168	\$48,618			\$121,157
(9)	Total Unpaid Labour (2+5)	\$3,324	\$18,366	\$7,286	\$8,888	\$9,827
	Gross Operating Surplus (1-8+9)	\$11,460	\$16,461	\$98,583	\$172,783	\$69,527
(10)	Business Profit before Depreciation (1-8)	\$8,136	-\$1,905	\$91,298	\$163,895	\$59,700
(11)	Depreciation	\$4,313	\$3,951	\$18,280	\$20,203	\$11,110
(12)	Business Profit (10-11)	\$3,823	-\$5,857	\$73,018	\$143,692	\$48,590
(13)	Profit at Full Equity (12+4+6 ^a)	\$7,840	-\$4,178	\$76,716	\$146,859	\$51,673
(14)	Fishing Gear and Equipment	\$229,059	\$293,593	\$692,323	\$849,283	\$496,803
	Rate of Return on Fishing Gear and Equipment at Full Equity (13/14*100)	3.4%	-1.4%	11.1%	17.3%	10.4%

Table 3-9Financial performance in the Charter Sector, by employment (fte) quartile, 2021/22

^a Part of leasing and rent is assumed to cover depreciation of buildings and equipment so is excluded from profit at full equity. Source: 2021/22 survey

			Average per Business	
		Game and Sport fishing	Coral reef, Rocky reef, and Inshore fishing	All Businesses
	Charter Businesses			
	Active Businesses (no.)	44	70	114
	Sample Size (n)	8	15	23
	Charter Activity			
	Trip days (no.)	93	64	75
	Client days (no.)	956	565	716
	Employment			
	FTE Jobs	0.7	1.4	1.1
	Total Jobs	1.4	2.4	2.0
(1)	Gross Income	\$239,229	\$210,865	\$221,801
	Variable costs			
	Fuel	\$48,662	\$40,935	\$43,914
	Ice & Bait	\$6,624	\$5,866	\$6,158
	Fishing tackle	\$2,568	\$5,535	\$4,391
	Provisions	\$1,443	\$10,994	\$7,311
	Labour - paid	\$19,592	\$30,036	\$26,009
(2)	Labour - unpaid	\$890	\$3,378	\$2,419
(2)	Repairs and maintenance	\$11,797	\$9,591	\$10,441
(3)	Total Variable Costs	\$91,576	\$106,334	\$100,644
(3)	Fixed costs	\$91,570	\$106,334	\$100,044
		ća 007	Ć2E0	
	Licence Fee	\$3,996	\$350	\$1,756
	Repairs and maintenance	\$6,551	\$11,582	\$9,642
	Insurance	\$6,124	\$11,002	\$9,121
(4)	Interest	\$0	\$1,249	\$768
_	Labour - paid	\$8,656	\$13,195	\$11,445
(5)	Labour - unpaid	\$1,233	\$11,283	\$7,408
(6)	Leasing and rent	\$2,041	\$6,253	\$4,629
	Rates	\$97	\$465	\$323
	Power	\$358	\$1,368	\$979
	Communications	\$794	\$2,708	\$1,970
	Legal & Accounting	\$1,180	\$1,728	\$1,517
	Slipping, Mooring & survey	\$2,975	\$7,470	\$5,737
	Travel	\$309	\$939	\$696
	Protective clothing & Uniforms	\$436	\$1,258	\$941
	Membership, Assoc. expenses	\$67	\$315	\$219
	Advertising	\$4,342	\$2,276	\$3,072
	Other	\$735	\$1,544	\$1,232
(7)	Total Fixed Costs	\$39,895	\$74,986	\$61,457
(8)	Total Costs (3+7)	\$131,471	\$181,320	\$162,101
	Gross Margin (1-3)	\$147,653	\$104,531	\$121,157
(9)	Total Unpaid Labour (2+5)	\$2,123	\$14,661	\$9,827
(*)	Gross Operating Surplus (1-8+9)	\$109,882	\$44,207	\$69,527
(10)	Business Profit before Depreciation (1-8)	\$107,758	\$29,545	\$59,700
(11)	Depreciation	\$8,775	\$12,574	\$11,110
(11)	Business Profit (10-11)	\$98,983	\$12,374	\$48,590
(12)	Profit at Full Equity (12+4+6 ^a)	\$100,004	\$10,971	\$48,590
		\$100,004		
(14)	Fishing Gear and Equipment Rate of Return on Fishing Gear and		\$549,401	\$496,803
	Equipment at Full Equity (13/14*100)	24.2%	3.9%	10.4%

Table 3-10 Financial performance in the Charter Sector, by business model, 2021/22

^a Includes estuary, rivers, freshwater, impoundments.

^b Part of leasing and rent is assumed to cover depreciation of buildings and equipment so is excluded from profit at full equity. Source: 2021/22 survey

			Average per business	
		Multi-day trips & live aboard (>24hrs)	Day trips (<24hrs)	All Businesses
	Charter Businesses			
	Active Businesses (no.)	34	80	114
	Sample Size (n)	6	17	23
	Charter Activity			
	Trip days (no.)	40	90	75
	Client days (no.)	257	907	71
	Employment			
	FTE Jobs	0.6	1.4	1.
	Total Jobs	1.1	2.4	2.
(1)	Gross Income	\$78,105	\$281,901	\$221,80
	Variable costs			
	Fuel	\$16,411	\$55,417	\$43,91
	lce & Bait	\$1,216	\$8,225	\$6,15
	Fishing tackle	\$3,782	\$4,646	\$4,39
	Provisions	\$4,044	\$8,678	\$7,31
	Labour - paid	\$12,636	\$31,602	\$26,00
(2)	Labour - unpaid	\$2,833	\$2,246	\$2,41
(-)	Repairs and maintenance	\$5,261	\$12,608	\$10,44
(3)	Total Variable Costs	\$46,183	\$123,422	\$100,64
(3)	Fixed costs	<i>Q</i> 10, 100	<i>Q</i> 125, 122	<i>Q</i> 100,01
	Licence Fee	\$125	\$2,438	\$1,75
	Repairs and maintenance	\$8,621	\$10,070	\$9,64
	Insurance	\$11,401	\$8,168	\$9,12
(4)	Interest	\$374	\$932	\$76
(4)	Labour - paid	\$6,153	\$13,659	\$11,44
(5)	Labour - unpaid	\$15,008	\$4,230	\$7,40
	Leasing and rent	\$6,324	\$3,920	\$4,62
(6)	Rates	\$418	\$283	\$4,62
	Power		\$599	\$97
		\$1,888		
	Communications	\$3,140	\$1,481	\$1,97
	Legal & Accounting	\$1,381	\$1,574	\$1,51
	Slipping, Mooring & survey	\$12,177	\$3,043	\$5,73
	Travel	\$1,041	\$552	\$69
	Protective clothing & Uniforms	\$1,414	\$743	\$94
	Membership, Assoc. expenses	\$34	\$297	\$21
	Advertising	\$2,317	\$3,388	\$3,07
<	Other	\$127	\$1,694	\$1,23
(7)	Total Fixed Costs	\$71,942	\$57,071	\$61,45
(8)	Total Costs (3+7)	\$118,124	\$180,494	\$162,10
	Gross Margin (1-3)	\$31,922	\$158,479	\$121,15
(9)	Total Unpaid Labour (2+5)	\$17,842	\$6,475	\$9,82
	Gross Operating Surplus (1-8+9)	-\$22,178	\$107,883	\$69,52
(10)	Business Profit before Depreciation (1-8)	-\$40,020	\$101,408	\$59,70
(11)	Depreciation	\$8,253	\$12,304	\$11,11
(12)	Business Profit (10-11)	-\$48,273	\$89,103	\$48,59
(13)	Profit at Full Equity (12+4+6ª)	-\$44,737	\$91,996	\$51,67
(14)	Fishing Gear and Equipment	\$562,541	\$469,309	\$496,80
	Rate of Return on Fishing Gear and Equipment at Full Equity (13/14*100)	-8.0%	19.6%	10.4

Table 3-11 Financial performance in the Charter Sector, by main trip length, 2021/22

^a Part of leasing and rent is assumed to cover depreciation of buildings and equipment so is excluded from profit at full equity. Source: 2021 survey

			Region To	tal	
		Gulf of Carpentaria and Far North, Cairns, and Townsville	Mackay, Isaac & Whitsunday, and Central Queensland	Wide Bay and South East Queensland	Queensland
	Charter Businesses				
	Active Businesses (no.)	40	40	34	114
	Sample Size (n)	11	6	6	23
	Charter Activity				
	Trip days (no.)	2,777	3,153	2,652	8,582
	Client days (no.)	21,448	36,827	23,302	81,577
	Employment FTE Jobs	64.6	41.8	22.5	128.9
	Total Jobs	104.6	68.4	57.4	230.4
(1)	Gross Income	\$8,506,338	\$10,891,716	\$5,887,246	\$25,285,299
(1)	Variable costs	\$0,500,550	\$10,091,710	\$5,007,240	\$25,205,299
	Fuel	¢7 717 706	\$1,593,556	¢1 070 249	¢5 004 210
		\$2,342,286		\$1,070,368 \$183,292	\$5,006,210
	Ice & Bait	\$357,647 \$206,144	\$161,073	. ,	\$702,013
	Fishing tackle	\$564,925	\$169,760	\$124,676	\$500,579 \$833,508
	Provisions Labour - paid	. ,	\$170,458	\$98,125	. ,
(2)		\$1,488,942	\$841,893	\$634,191	\$2,965,026
(2)	Labour - unpaid	\$106,050	\$130,156	\$39,565	\$275,770
(2)	Repairs and maintenance Total Variable Costs	\$496,501	\$388,693	\$305,127	\$1,190,321
(3)	Fixed costs	\$5,562,495	\$3,455,589	\$2,455,344	\$11,473,428
	Licence Fee	\$15,586	\$17,573	\$167,030	\$200,100
					\$200,190
	Repairs and maintenance	\$578,825	\$303,333	\$217,063	\$1,099,221 \$1,039,813
(4)	Insurance	\$580,763	\$204,800	\$254,250	
(4)	Interest	\$22,629	\$0 \$283,333	\$64,875 \$305,838	\$87,504
(E)	Labour - paid	\$715,581			\$1,304,751
(5)	Labour - unpaid	\$254,773	\$548,397	\$41,370	\$844,541
(6)	Leasing and rent	\$196,571	\$107,467	\$223,700	\$527,738
	Rates	\$23,018	\$1,667	\$12,100	\$36,784
	Power	\$63,357	\$20,667	\$27,575	\$111,599
	Communications	\$119,610	\$47,867	\$57,125	\$224,601
	Legal & Accounting	\$99,833	\$34,000	\$39,100	\$172,933
	Slipping, Mooring & survey	\$462,467	\$56,667	\$134,875	\$654,009
	Travel	\$60,679	\$18,667	\$0	\$79,346
	Protective clothing & Uniforms	\$64,776	\$23,333	\$19,185	\$107,295
	Membership, Assoc. expenses	\$17,899	\$3,667	\$3,450	\$25,015
	Advertising	\$87,031	\$77,000	\$186,225	\$350,256
(-)	Other	\$80,953	\$27,333	\$32,175	\$140,462
(7)	Total Fixed Costs	\$3,444,352	\$1,775,770	\$1,785,935	\$7,006,058
(8)	Total Costs (3+7)	\$9,006,847	\$5,231,359	\$4,241,279	\$18,479,486
(0)	Gross Margin (1-3)	\$2,943,843	\$7,436,127	\$3,431,902	\$13,811,871
(9)	Total Unpaid Labour (2+5)	\$360,823	\$678,553	\$80,935	\$1,120,311
	Gross Operating Surplus (1-8+9)	-\$139,686	\$6,338,910	\$1,726,902	\$7,926,125
(10)	Business Profit before Depreciation (1-8)	-\$500,509	\$5,660,356	\$1,645,967	\$6,805,814
(11)	Depreciation	\$599,423	\$473,768	\$193,317	\$1,266,508
(12)	Business Profit (10-11)	-\$1,099,933	\$5,186,588	\$1,452,650	\$5,539,306
(13)	Profit at Full Equity (12+4+6 ^a)	-\$979,018	\$5,240,322	\$1,629,375	\$5,890,679
(14)	Fishing Gear and Equipment	\$26,339,618	\$18,639,000	\$11,656,950	\$56,635,568
	Rate of Return on Fishing Gear and Equipment at Full Equity (13/14*100)	-3.7%	28.1%	14.0%	10.4%

Table 3-12 Financial performance in the Charter Sector, by fishing region, 2021/22

Source: 2021/22 survey

3.5. State and regional economic contribution

Estimates of the economic contribution of the Charter Sector to the Queensland and regional economies in 2021/22 are outlined in this section. Contribution analysis is a descriptive analysis that traces the gross economic activity of the sector as dollars of expenditure cycle through the regional and state economies. The analysis has utilised the detailed industry specific data reported above in combination with other regional/state data that highlight the current linkages that exist within the economy to estimate indicators such as gross regional product and employment. The analysis has been undertaken within a modelling framework known as input-output analysis, with the purpose being to determine how much direct and indirect economic activity is associated with the sector. This is because the contribution of the sector or flow-on effects are part of the contribution of fishing related businesses to the economy and must be added to the direct effects in order to get a full appreciation of the economic contribution of the sector. This method was recommended by the National Fisheries and Aquaculture Industry Contributions Study (FRDC project 2017-210) (BDO EconSearch 2019). Though charter fishing operators were not in scope of the study, the method transfers well to charter fishing operators.

The terms 'contribution' and 'impact' are often used interchangeably, particularly in the context of regional economic analysis where decision makers wish to use the results from such analyses to inform policy decisions, to facilitate industry development or support a particular business strategy. However, they are distinctly different types of analysis. At the most basic level, a contribution analysis can be thought of as a 'footprint' or 'snapshot' analysis of economic activity, whereas an impact analysis can be thought of as an analysis of a change in economic activity. An economic impact analysis is an appropriate approach where an industry is generating new revenues that would otherwise not occur, keeping revenues in the region that would otherwise be lost, or being subject to changes that result in existing revenues being lost. Economic impact analysis will generally require more data than a contribution analysis and may require more sophisticated models, such as an extended input-output model or a properly specified computable general equilibrium model, or means to estimate people's likely behaviour in response to the change (Watson et al. 2014).

3.5.1. Measuring direct and flow-on effects

The activities have been included in the quantifiable economic contribution:

- operation of charter fishing businesses
- capital expenditure by charter fishing businesses.

Each of these activities generates flow-on effects to other sectors through purchases of inputs and the employment of labour. As noted above, these flow-on effects have been estimated using input-output analysis.

Since charter fishing involves providing an experience to visitors, it is likely that the activity draws visitors to the regions where it takes place that would not otherwise have visited. These visitors spend in the region, causing further flow-on economic effects. Significant uncertainty surrounds quantification of this type of economic effect so it has been excluded from this analysis. Further research into the effect that charter fishing operation has on visitation to the regions is recommended to quantify this economic contribution.

To compile a representative cost structure for the Charter Sector, costs per business were derived from survey data provided by operators in the sector (for detail see Section 1.1). On an item-by-item basis, the expenditures were allocated between those occurring in the fishing region, those occurring in Queensland and those goods and services imported from outside the state.

Estimates of the capital expenditure per fishing business were derived from the survey of fishing businesses and regional economic models.

Economic contributions have been specified in terms of the following economic indicators:

- value of output
- employment
- household income
- contribution to gross state or regional product.

Value of output is a measure of the gross revenue of goods and services produced by commercial organisations plus gross expenditure by government agencies. This indicator needs to be used with care as it includes elements of double counting.

Employment is a measure of the number of working proprietors, managers, directors and other employees, in terms of the number of full-time equivalent jobs.

Household income is a component of gross state product (GSP) and gross regional product (GRP) and is a measure of wages and salaries, drawings by owner operators and other payments to labour including overtime payments and income tax, but excluding payroll tax.

Contribution to GSP or GRP is a measure of the net contribution of an activity to the state/regional economy. Contribution to GSP or GRP is measured as value of output less the cost of goods and services (including imports) used in producing the output. It can also be measured as household income plus other value added (gross operating surplus and all taxes, less subsidies). It represents payments to the primary inputs of production (labour, capital and land). Using GSP or GRP as a measure of economic contribution avoids the problem of double counting that may arise from using value of output for this purpose.

3.5.2. Economic contribution to Queensland

Estimates of the economic contribution to Queensland generated in 2021/22 by the Charter Sector are outlined in Table 3-13. This section summarises the key points from these tables.

Direct contribution measures charter fishing activity and associated capital expenditure. The flow-on contribution measures the economic effects in other sectors of the economy (retail and wholesale trade, manufacturing, etc.) generated by direct activity, that is, the multiplier effects. Flow-on effects are disaggregated by industry with the top 10 industries shown separately in each on the table. Capital expenditures are assumed to be the same as depreciation which may or may not be the case in a given year but is a reasonable assumption in the long-run. Economic contribution of capital expenditure should, therefore, be interpreted as a long-run average.

Value of output

The value of output (GVP) generated directly in the Charter Sector was \$25.3m in 2021/22 while output generated by associated capital expenditure was \$0.5m. Flow-on output is a biased indicator of economic contribution due to double-counting of values so in not interpreted further here.

Employment

The Charter Sector was responsible for the direct employment of an estimated 129 full-time equivalent (fte) jobs in 2021/22 while capital expenditure supported another 2 fte jobs. Flow-on business activity was estimated to support a further 107 fte jobs state-wide. These jobs were concentrated in the personal & other services, retail trade, professional, scientific & technical services, health & community services, and

food & beverage services sectors. The total employment contribution to Queensland was estimated to be 238 fte jobs.

Household income

Personal income of \$5.4m was earned in 2021/22 in the Charter Sector (wages of employees and estimated drawings by owner/operators). A further \$0.2m of income was earned in capital expenditure activities. An additional \$9.6m was earned by wage earners in other businesses in Queensland from the flow-on effects of fishing and associated activities. The total household income contribution in Queensland was \$15.1m.

Contribution to GSP and GRP

As noted above, contribution to GSP or GRP is measured as value of output less the cost of goods and services (including imports) used in producing the output. Total Charter Sector related contribution to GSP in Queensland was \$31.0m in 2021/22, with \$15.6m generated by charter fishing operation directly, \$0.2m generated by capital expenditure activities and \$15.2m supported in other sectors of the state economy.

Sector	Output (\$m)	GSP (\$m)	Household Income (\$m)	Employment (fte)	Employment (total)
Direct effects					
Charter Fishing	25.3	15.6	5.4	129	230
CAPEX	0.5	0.2	0.2	2	2
Total Direct	25.8	15.8	5.6	131	233
Flow-on effects					
Personal & Other Services	4.3	2.0	2.3	29	30
Retail Trade	2.8	1.5	1.2	18	22
Professional, Scientific & Technical Services	2.8	1.7	1.8	14	13
Health & Community Services	1.1	0.8	0.7	8	9
Food & Beverage Services	1.1	0.5	0.5	8	11
Insurance & Other Financial Services	2.6	1.3	0.6	5	5
Admin Support Services	1.6	1.0	1.0	5	6
Education & Training	0.6	0.4	0.4	5	5
Wholesale Trade	1.5	0.7	0.5	4	3
Road Transport	0.8	0.3	0.3	3	3
Other Sectors	10.4	5.0	0.4	8	6
Total Flow-on	29.5	15.2	9.6	107	113
Total	55.3	31.0	15.1	238	346
Total/Direct	2.1	2.0	2.7	1.8	1.5

 Table 3-13
 Economic contribution of the Charter Sector to Queensland, 2021/22

3.5.3. Regional economic contributions

Direct economic contribution of fishing activity by fishing region in 2021/22 is detailed in Table 3-14. This includes direct activity only and excludes flow-on activity. The regions appear in the table in order of the magnitude of economic contribution to fte employment.

On the following pages (Table 3-15 to Table 3-17), estimates of the economic contribution of the Charter Sector to each fishing region are presented in detail for 2021/22. Estimates presented in the tables can be interpreted in the same way as those presented at the state level (see Section 3.5.2).

Region	Output (\$m)	GSP (\$m)	Household Income (\$m)	Employment (fte)	Employment (total)
Queensland	25.8	15.8	5.6	131	233
Gulf of Carpentaria and Far North, Cairns and Townsville	8.7	3.6	2.6	65	106
Mackay, Isaac & Whitsunday and Central Queensland	11.1	8.8	1.9	43	69
Wide Bay and South East Queensland	5.9	3.1	1.0	23	58

Table 3-14Direct economic contribution of fishing activity in the Charter Sector to regions, 2021/22

Source: BDO EconSearch analysis

Table 3-15Economic contribution of the Charter Sector to Gulf of Carpentaria and Far North, Cairns and
Townsville, 2021/22

Sector	Output (\$m)	GSP (\$m)	Household Income (\$m)	Employment (fte)	Employment (total)
Direct effects					
Charter Fishing	8.5	3.5	2.6	65	105
CAPEX	0.2	0.1	0.1	1	1
Total Direct	8.7	3.6	2.6	65	106
Flow-on effects					
Personal & Other Services	1.2	0.5	0.6	8	7
Retail Trade	0.8	0.4	0.3	5	6
Professional, Scientific & Technical Services	0.6	0.4	0.4	3	3
Health & Community Services	0.3	0.2	0.2	2	3
Food & Beverage Services	0.2	0.1	0.1	2	2
Road Transport	0.3	0.1	0.1	1	1
Wholesale Trade	0.4	0.2	0.1	1	1
Admin Support Services	0.3	0.2	0.2	1	1
Education & Training	0.1	0.1	0.1	1	1
Beef Cattle	0.1	0.1	0.0	1	0
Other Sectors	4.1	2.2	0.6	7	6
Total Flow-on	8.5	4.5	2.7	32	32
Total	17.1	8.0	5.3	97	138
Total/Direct	2.0	2.2	2.0	1.5	1.3

Table 3-16	Economic contribution of the Charter Sector to Mackay, Isaac & Whitsunday and Central
	Queensland, 2021/22

Sector	Output (\$m)	GSP (\$m)	Household Income (\$m)	Employment (fte)	Employment (total)
Direct effects					
Charter Fishing	10.9	8.7	1.8	42	68
CAPEX	0.2	0.1	0.1	1	1
Total Direct	11.1	8.8	1.9	43	69
Flow-on effects					
Personal & Other Services	0.7	0.3	0.4	4	4
Retail Trade	0.6	0.3	0.2	3	4
Food & Beverage Services	0.2	0.1	0.1	1	2
Health & Community Services	0.1	0.1	0.1	1	1
Professional, Scientific & Technical Services	0.2	0.1	0.1	1	1
Admin Support Services	0.2	0.1	0.1	1	1
Road Transport	0.2	0.1	0.1	1	1
Wholesale Trade	0.2	0.1	0.1	1	1
Beef Cattle	0.1	0.1	0.0	1	0
Education & Training	0.0	0.0	0.0	0	0
Other Sectors	2.1	1.1	0.2	3	3
Total Flow-on	4.6	2.4	1.4	16	17
Total	15.7	11.2	3.3	59	87
Total/Direct	1.4	1.3	1.7	1.4	1.2

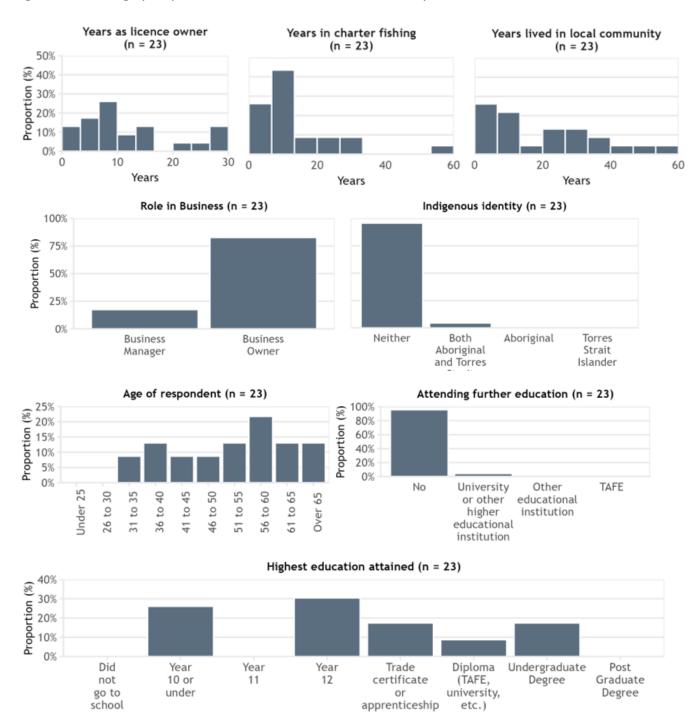
Source: BDO EconSearch analysis

Table 3-17 Economic contribution of the Charter Sector to Wide Bay and South East Queensland, 2021/22

Sector	Output (\$m)	GSP (\$m)	Household Income (\$m)	Employment (fte)	Employment (total)
Direct effects					
Charter Fishing	5.9	3.1	1.0	23	57
CAPEX	0.1	0.0	0.0	0	0
Total Direct	5.9	3.1	1.0	23	58
Flow-on effects					
Personal & Other Services	0.8	0.4	0.5	6	6
Retail Trade	0.5	0.3	0.2	3	4
Professional, Scientific & Technical Services	0.5	0.3	0.3	2	2
Health & Community Services	0.2	0.1	0.1	1	2
Admin Support Services	0.3	0.2	0.2	1	1
Food & Beverage Services	0.1	0.1	0.1	1	1
Education & Training	0.1	0.1	0.1	1	1
Wholesale Trade	0.2	0.1	0.1	1	1
Public Admin & Regulatory Services	0.1	0.1	0.1	1	1
Road Transport	0.1	0.1	0.0	1	0
Other Sectors	2.3	1.2	0.3	4	4
Total Flow-on	5.3	2.8	1.9	21	23
Total	11.3	5.9	2.9	44	80
Total/Direct	1.9	1.9	2.8	1.9	1.4

4. Demographic indicators

The charts below and on the following page present a demographic profile of fishers who were active in the Charter Sector in Queensland in 2021/22. These are raw sample data and have not been expanded to the sector level.





Source: BDO EconSearch analysis

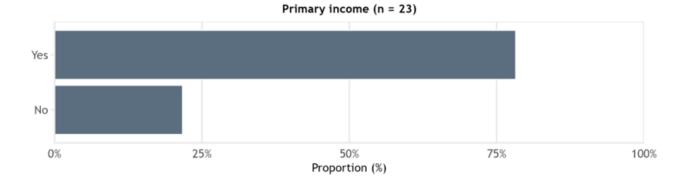
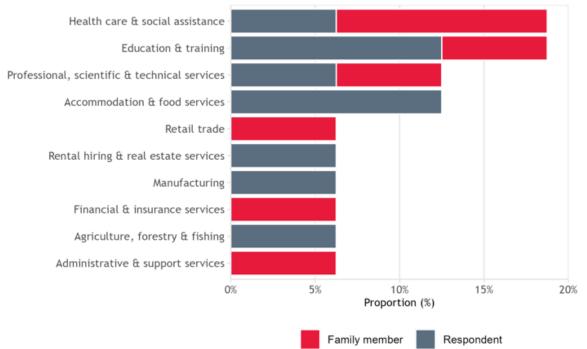
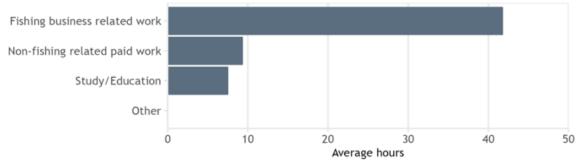


Figure 4-2 Demographic profile of the Charter Sector in 2021/22 - part 2









Source: BDO EconSearch analysis

5. Social indicators

Charter fishing operators derive non-financial benefits and costs from charter fishing and contribute to the community in different ways. A comprehensive set of social indicators were captured in the 2021/22 survey, including:

- Perceptions of management
- Lifestyle and satisfaction
- Community contribution.

5.1. Perceptions of management

The charts below present charter fishing operators' perceptions of different aspects of fisheries management, treatment, and participation in 2021/22.

High levels of stewardship are associated with a good understanding of the rules and regulations that apply to fishing activities and ease of compliance. Figure 5-1 shows that most charter fishing operators felt that they understand the management arrangements for the Charter Sector. Figure 5-2 shows that respondents felt that most charter fishing operators complied with rules and regulations and that it was easy to do so. However, they were split as to whether they trust and are satisfied with Fisheries Queensland and their management of the Charter Sector.

Figure 5-3 shows how charter fishing operators felt about their treatment in the Charter Sector regarding various management and regulation aspects. Most charter fishing operators felt positively regarding gear restrictions, allocation of catch and access to fishing areas. Approximately half of the operators felt that the processes used to make decisions about fisheries management are fair.

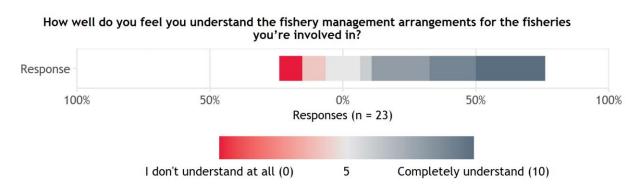
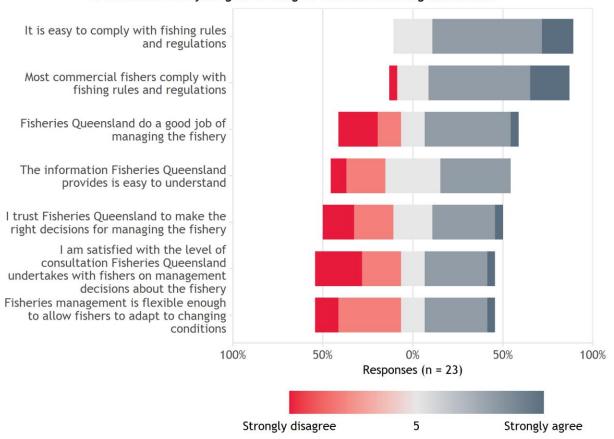




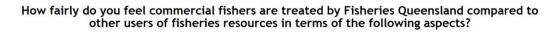
Figure 5-2 Perceptions of fishery/sector management in the Charter Sector, 2021/22

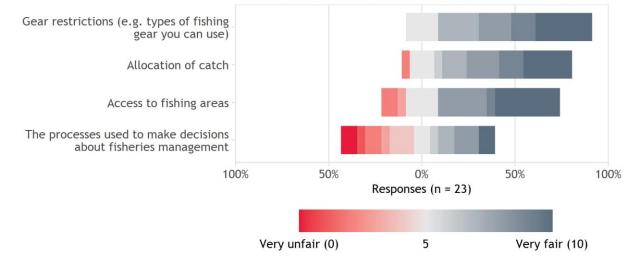


To what extent do you agree or disagree with the following statements?

Source: BDO EconSearch analysis

Figure 5-3 Perceptions of fishery/sector treatment in the Charter Sector, 2021/22





5.2. Lifestyle and satisfaction

The charts below present indicators of fishing and lifestyle satisfaction of being a charter fishing operator in Queensland in 2021/22.

Figure 5-4 shows that all charter fishing operators felt that their fishing activities are important. In general, operators also plan to stay in the industry, with many respondents stating that they plan to stay in the industry for as long as possible. On the other end of the spectrum, no respondents stated that they plan to leave the industry as soon as possible.

Figure 5-5 shows that charter fishing operators were satisfied with many aspects of being in the industry. All operators were satisfied with being on the water, working outdoors, the challenge and adventure of the job, and the safety of working conditions. Respondents were less satisfied with the predictability of their income and the total income generated, as well as the current fishing regulations.

Figure 5-5 also shows that most charter fishing operators were satisfied with several aspects of the infrastructure provided for fishing, including bait and other supplies, marinas and mooring facilities, accommodation near fishing areas, and fishing ramps, jetties, and wharfs. Respondents were split on how satisfied they were with other aspects of the infrastructure provided for fishing such as toilets, fuel and repair facilities, roads accessing fishing areas, fish attraction devices and artificial reefs, fish cleaning benches and offal disposal facilities, and reservoirs.

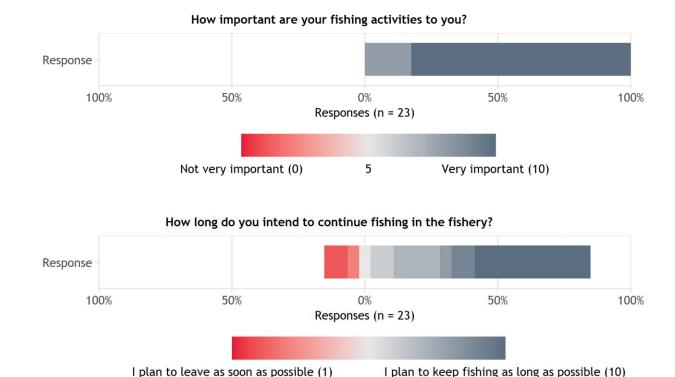


Figure 5-4 Fishing satisfaction in the Charter Sector, 2021/22

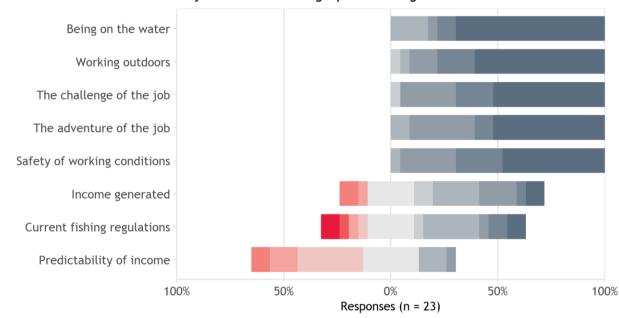
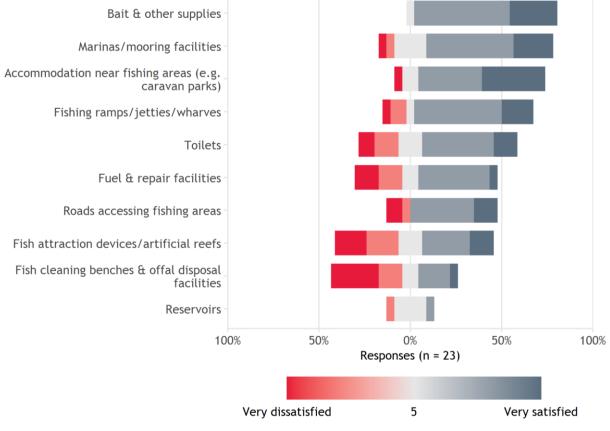


Figure 5-5 Life satisfaction in the Charter Sector, 2021/22



Not satisfied at all (0) 5 Extremely satisfied (10)





5.3. Community contribution and perception

The charts below present the perceptions of charter fishing operators' community connectedness and contribution, alongside how they believe the community perceives the Charter Sector.

Figure 5-6 shows the contribution charter fishing operators made to their local communities in 2021/22. The most time operators spent contributing to the community was on volunteering for community services (e.g. RFS, SES, ambulance, schools), followed by time spent participating in marine rescue and recovery, and compiling fishing related information for research (e.g. catch and effort data). Figure 5-7 shows that all operators believe that the community perceived the Charter Sector either neutrally or quite positively.

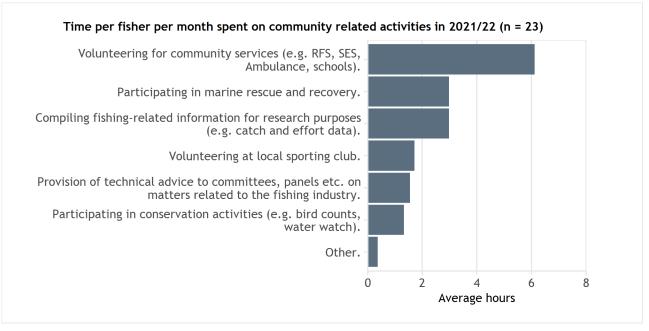
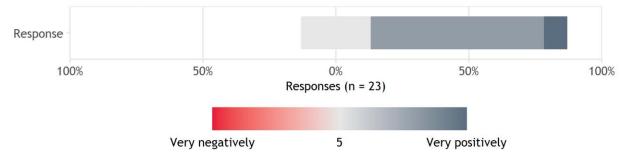


Figure 5-6 Community contribution in the Charter Sector, 2021/22



Figure 5-7 Community perceptions of the Charter Sector, 2021/22



How do you believe most people in the general community perceive charter fishers?

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