

Making mountains out of minnows

Salmon in the Tasmanian economy

The economic benefit of the salmon industry to Tasmania is weighted strongly against its environmental and social impacts. Yet it accounts for just 1% of jobs in the state. Over 5 years \$3.8 billion worth of fish were sold, but just \$64 million tax paid, while \$9.3 million in subsidies were received in 2 years. Changing generous leasing arrangements to the Norwegian model could raise \$2 billion for community development.

Discussion paper

Leanne Minshull

Bill Browne

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Level 1, Endeavour House, 1 Franklin St

Canberra, ACT 2601

Tel: (02) 61300530

Email: mail@tai.org.au

Website: www.tai.org.au

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Summary

Political leaders routinely exaggerate the salmon industry’s economic role in Tasmania. The Tasmanian Government describes it as “critically important” and trade unions have called it Tasmania’s “brightest economic prospect”. With views like this, the relative cost to the environment imposed by the industry can be skewed. This is concerning, because economic data does not support the claims of the industry’s importance.

Employment: The salmon industry is the 40th largest sector by employment in Tasmania, employing fewer than car repairs or child care. It employs about 1,500 people, or 0.6% of total employment in the state.

Employment in Tasmania, selected industries



Source: ABS (2016) *Census* and salmon industry calculations above.

Gross state product: Industry figures put salmon aquaculture’s contribution to Gross State Product at somewhere between 0.6% and 2.3% of total Gross State Product. Tasmania, like other Australian states, is largely a services economy.

Production, income and taxes: Over the five years from 2013 to 2018 the Tasmanian salmon industry sold 255,000 tonnes of fish, worth \$3.8 billion. This revenue produced \$416 million in taxable income, an approximation of profit. \$64 million in tax was paid, equal to 2% of production value and 15% of taxable income.

Subsidies: The industry has benefited from significant state and federal subsidies, with at least \$9.3 million paid in the last two years.

State and local payments: The salmon industry does not pay council rates on its marine leases, putting it at an advantage compared to land-based industries. When councils considered charging rates on marine leases, the Tasmanian parliament legislated to remove that power from them.

Annual lease and licence fees are paid to the State Government, of approximately \$923,000 for the entire industry. This represents 0.1% (one-thousandth) of the total farmgate production of the salmon industry in Tasmania, and 0.02% of total state revenue. Changing the current licensing regime to one similar to the Norwegian system could return between \$707 million and \$2 billion at government auction.

Introduction

The Tasmanian Government describes the state's salmon industry as “critically important” and “important to the economic future of the state”. If industry plans to almost double in size are met, it will be “one of the largest industries in the Tasmanian economy”.¹

Then Opposition Leader Bill Shorten said in 2017 that the industry accounted for “literally thousands of local jobs” and was “an important part of the Tasmanian economy”.² Shorten's union, the Australian Workers Union, describes salmon as Tasmania's “brightest economic prospect” and a “critical growth industry”.³ Even Tasmanian chef and SBS personality Matthew Evans, who has since been critical of the salmon industry, said that in Tasmania “everyone knows someone who works in the salmon industry.”⁴

Everyone seems to know that salmon is big business and critical to Tasmania. Some believe this perception has resulted in the environmental impacts of the industry being brushed aside.⁵ This report puts Tasmania's salmon industry into its wider economic context.

¹ Tasmanian Liberals (2019) *Labor's deal to devastate the Salmon industry*, <https://www.facebook.com/watch/?v=821201188242813>; Tasmanian Government (2018) *Tasmania Delivers ... The perfect environment for an innovative and successful aquaculture industry*, https://web.archive.org/web/20190306111042/https://www.cg.tas.gov.au/__data/assets/pdf_file/0003/123447/Tasmania_Delivers_-_Aquaculture.pdf

² O'Connor (2017) *The Australian Workers Union enlists @billshortenmp to drum up support for Tasmania's salmon industry.*, <https://twitter.com/TedOConnor4/status/821972594081415169>

³ AWU (n.d.) *Tassie Salmon*, <https://www.tassiesalmon.com.au/>

⁴ Dubecki (2017) *Are we eating too much salmon?*, <https://www.goodfood.com.au/recipes/news/are-we-eating-too-much-salmon-20170921-gylrqu>

⁵ Konkes (2017) *Bender's choice*, <https://www.themonthly.com.au/issue/2017/october/1506780000/claire-konkes/bender-s-choice>

Employment

The salmon industry is a small employer in Tasmania. While there are various estimates, the entire industry represents around one percent of the 216,547 Tasmanians in work at the last census. According to a 2015 report commissioned by the Tasmanian Salmonid Growers Association, written by KPMG:

The total contribution of the combined aquaculture firms to the Tasmania economy is 2.3% of State GSP and 1.2 % of State employment.

In other words, 99% of Tasmanians do not work in the salmon industry, according to the industry itself.

In fact, this represents a substantial overestimate of the size of employment in the salmon industry. The 1.2% estimate refers not just to people employed in the salmon industry, but also includes jobs ‘supported’ in other industries:

[The salmon industry provides] support for approximately 2,786 FTE jobs (full time positions employed in, or supported by the industry).⁶

By reporting jobs ‘supported’ rather than direct numbers of employees, the industry exaggerates its economic impact. If all industries added up the number of jobs they support in other industries this would double or triple count many jobs, giving a total far greater than the number of employees in the economy. While the impact of the salmon industry on other industries may be debated, the total numbers estimated by KPMG are of limited use as they estimate the impact of the entire industry, as if the entire industry’s presence or absence could be a subject of policy debate.

In reality, it is marginal expansions or contractions of the industry that are affected by policy decisions. With supply and marketing chains already established, marginal expansions are likely to have a minimal impact on ‘supported’ employment.

Because of its tendency to overstate employment impacts, the class of economic model used by KPMG has been described by the Productivity Commission as widely “abused”, “biased” by the Australian Bureau of Statistics and “deficient” by the NSW Land and Environment Court.⁷

⁶ KPMG (2015) *Economic Impact Assessment: Tasmanian Aquaculture Industry*, p. ii, <https://www.tsga.com.au/wp-content/uploads/2014/11/TSGA15-Economic-Impact-Report.pdf>

⁷ Gretton (2013) *On Input-output Tables: uses and abuses*, <https://www.pc.gov.au/research/supporting/input-output-tables>; ABS (2010) *Input output multipliers*,

While the modelled figure including ‘supported’ jobs is used in KPMG’s percentages, in its headline figures and executive summary, the report does include a figure of direct industry employees in Tasmania – 1,365. This represents 0.6% of Tasmanian jobs.

KPMG’s report is based on 2014 data. While the value of salmon production has increased by 20% since then, employment is unlikely to have had a similar boost. A 2018 report by the International Salmon Farmers Association, that Tasmania’s industry contributed to, says only vaguely:

The salmon and trout farming industry currently create over 1,500 direct jobs [in Tasmania].⁸

While there has been growth in the salmon industry’s output since 2014, the trend towards automation in the industry is likely to have kept jobs numbers down.⁹ Tassal is investing in automated feeders and camera-based monitoring, and has a “completely integrated automation solution” for its new smolt tanks.¹⁰ Huon feeds its fish “from a central feeding room in Hobart”, with software adjusting feeding rates automatically based on on-site video feeds, and it is moving to “fully automated and unmanned feed barges”.¹¹

How this will affect salmon industry employment in the future is not clear. In 2017, Senator Peter Whish-Wilson revealed leaked documents from Tassal that showed that an automated feed method would allow them to employ one third as many feed staff

<https://www.abs.gov.au/AUSSTATS/abs@.nsf/Previousproducts/5209.0.55.001Main%20Features4Final%20release%20200607%20tables?opendocument&tabname=Summary&prodno=5209.0.55.001&issue=Final%20release%202006-07%20tables&num=&view=>; Preston (2013) *Bulga Milbrodale Progress Association Inc v Minister for Planning and Infrastructure and Warkworth Mining Limited*, NSW Land and Environment Court

⁸ International Salmon Farmers Association (2018) *Salmon farming: Sustaining communities and feeding the world*, pp. 14, 23, <https://www.tsga.com.au/wp-content/uploads/2018/06/ISFA-Socio-Economic-report-2018.pdf>

⁹ Fantin (2017) *Tassal trading halted while \$100m in capital raised*, [https://www.abc.net.au/news/2017-03-02/tassal-trading-halted-while-\\$100m-in-capital-raised/8317942](https://www.abc.net.au/news/2017-03-02/tassal-trading-halted-while-$100m-in-capital-raised/8317942); Mereghetti (2017) *Chile’s Blumar invests \$7m in upgrading salmon feeding systems, automation*, <https://www.undercurrentnews.com/2017/09/04/chiles-blumar-invests-7m-in-upgrading-salmon-feeding-systems-automation/>; Sinefa (2018) *Case Study - Huon aquaculture*, <https://web.archive.org/web/20180528141024/https://www.sinefa.com/case-study-huon-aquaculture>

¹⁰ NHP Electrical Engineering (n.d.) *Nothing mainstream about Tassal salmon*, https://www.nhp.com.au/files/editor_upload/File/Case%20Studies/Tassal%20Salmon.pdf; SBS News (2017) *Bigger fish means bigger profit for Tassal*, <https://www.sbs.com.au/news/bigger-fish-means-bigger-profit-for-tassal>

¹¹ Huon Aquaculture (2018) *Annual Report 2018*, p. 8, <http://investors.huonaqua.com.au/investors/?page=Annual-Reports>

as would be employed for their current method. Instead of feed staff numbers increasing from 65 to 105 by 2025, they would fall to 35.¹²

Assuming current industry employment of 1,500 people, as stated by the International Salmon Farmers Association, the industry represents 0.7% of Tasmanian employment. Comparing this figure to ABS data on other industries, the salmon industry is the 40th largest employing sector in Tasmania. Figure 1 below shows a selection of Tasmanian industries:

Figure 1: Employment in Tasmania, selected industries



Source: ABS (2016) *Census* and salmon industry calculations above.

Figure 1 above shows that education and health services are the highest employing sectors in Tasmania, as they are in most of Australia. Service industries dominate employment in most developed economies. Tasmania’s tourism focus is shown in the large employment shares of accommodation, retail and hospitality sectors.

The salmon industry by contrast employs fewer people than child care, car repairs, or hardware stores. It employs slightly more people than baking (not to be confused with

¹² Whish-Wilson (2017) *ADJOURNMENT - Tasmania: Aquaculture Industry*, https://www.aph.gov.au/Parliamentary_Business/Hansard/Hansard_Display?bid=chamber/hansards/38a7c160-c946-4e90-b0c4-7c50493e1073/&sid=0221

retail bakeries, likely to employ more) or metal ore mining – most mining other than quarries in Tasmania.

Another estimate of salmon industry employment can be made from company annual reports and public statements. Tasmania's salmon industry is dominated by just three companies – Tassal, Huon and Petuna. There are only a handful of small businesses outside of these three. Tassal reports 1,261 employees and Huon reports 659. Petuna reportedly employs 264.¹³ This sums to a total of 2,184 employees. This includes employees in other states and territories. Huon has employees in “most” states, including sales in Perth, Brisbane and Melbourne.¹⁴ Their Sydney operations have both sales and processing facilities.¹⁵ Tassal has operations in Sydney and prawn farms in Queensland.¹⁶ Petuna is not listed and is privately owned by the Rockliff family and New Zealand-Japanese firm Sealord group. It does not publish detailed annual reports.

¹³ Bingham (2018) *Shock as Petuna axes 22 senior jobs*, <https://www.theadvocate.com.au/story/5230450/shock-as-petuna-axes-22-senior-jobs/>; Huon Aquaculture (2019) *Sustainability Dashboard*, <http://sustainability.huonaqua.com.au>; Tassal (2018) *Employees*, <http://dashboard.tassalgroup.com.au/our-people/employees/>

¹⁴ Wiley & Co (2015) *\$12 million salmon processing facility opens in Tasmania*, <http://foodprocessing.com.au/content/the-food-plant/article/-12-million-salmon-processing-facility-opens-in-tasmania-605318147>

¹⁵ Huon (2019) *Our locations*, <https://www.huonaqua.com.au/working-at-huon-2/our-locations/>

¹⁶ Tassal (2019) *Join our team*, <http://tassalgroup.com.au/our-people/join-our-team/>

Gross state product

Tasmania's Gross State Product ("GSP") in financial year 2018 was \$30,266 million.¹⁷

Estimates of the salmon industry's contribution vary significantly, even between industry groups, at between 0.6% and 2.3% of Tasmania's GSP.

The most recent estimate of the salmon industry's contribution to Gross State Product is from the International Salmon Farmers Association, of which the Tasmanian Salmonid Growers' Association is a member. The International Salmon Farmers Association said in 2018 that the salmon and trout farming industry in Tasmania "currently" contributes \$190 million to Tasmanian GSP.¹⁸ This would represent about 0.6% of Tasmanian Gross State Product, or about 7% of agriculture, forestry and fishing's GSP contribution (\$2.7 billion).

By contrast, the KPMG report commissioned by the Tasmanian Salmonid Growers Association found the industry in 2015 had a "value added or net additions to GSP" of \$626 million, or 2.3% of GSP. The GSP contribution consists of \$264 million for "final demand", \$79 million for "industry effects" and \$283 million for "consumption effects".¹⁹ These latter effects are those "supported" in other industries, which suffer from the same problems discussed above. Even so, \$626 million would represent about 23% of agriculture, forestry and fishing's GSP contribution in 2018.

For context, Deloitte Access Economics calculated for Tourism Tasmania that tourism directly contributes \$1.4 billion to Gross State Product, which would represent about 5% of GSP.²⁰ As Deloitte itself acknowledges, calculating tourism's economic contribution is difficult,²¹ but the satellite accounts allow for the general comparison: which shows that tourism's GSP contribution is twice or more larger than that of the salmon industry.

¹⁷ ABS (2018) 5220.0 - *Australian National Accounts: State Accounts, 2017-18*, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/5220.0Main+Features12017-18?OpenDocument>

¹⁸ International Salmon Farmers Association (2018) *Salmon farming: Sustaining communities and feeding the world*, p. 23

¹⁹ KPMG (2015) *Economic Impact Assessment: Tasmanian Aquaculture Industry*, pp. 7–13

²⁰ Tourism Tasmania (2019) *Tourism Fast Facts*, <https://www.tourismtasmania.com.au/industry/facts>

²¹ For methodology and details about Deloitte's use of Tourism Research Australia's satellite accounts, see for example Deloitte Access Economics (2017) *Tasmanian Regional Tourism Satellite Accounts 2015-16*, https://www.tourismtasmania.com.au/__data/assets/pdf_file/0016/60622/Tasmanian-RTSA-2015-16-Report_FINAL.pdf

Overall, primary and secondary industries like mining, agriculture and manufacturing contribute 26% to Tasmanian GSP, compared to 54% from service industries.²²

²² The reminder consists of the “mixed” industry of electricity, gas, water and waste services; taxes less subsidies; and ownership of dwellings. ABS (2012) *Main Features - Service industries*, <https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/1301.0Main+Features332012>; (2018) 5220.0 - *Australian National Accounts: State Accounts, 2017-18*

Subsidies

The salmon industry receives several subsidies, including the unquantified public costs of regulating and managing the industry as well as specific grants and funding that can be quantified.

While outside the scope of this paper to calculate, the public costs for management, research and compliance serve as a subsidy to the salmon industry.²³

Tassal records \$2.3 million in government grants in 2017 and \$3.2 million in 2018.²⁴ In 2014, it received a \$3.85 million federal government grant for its Triabunna Processing Facility; this represents about three-quarters of the expected cost of the facility.²⁵

Huon Aquaculture records \$724,000 in government grants in 2017 and \$807,000 in 2018.²⁶ In each of 2017 and 2018, \$463,000 of the grant reflects the amortising of \$5 million of grants for its Parramatta Creek Smokehouse and Innovation Centre, which Huon received in 2015.²⁷ The grants, consisting of a \$3.5 million federal government contribution and \$1.5 million state government contribution, reflect about two-fifths of the \$12 million cost of the smokehouse.²⁸

The government also co-funds the Aquatic Animal Health and Vaccines Centre of Excellence²⁹ and in 2017 contributed \$2.3 million to BioMar's \$56 million fish feed production facility,³⁰ due to open in late 2019. BioMar is an international fish feed

²³ For discussion of the similar issues around public costs and public benefits for wild-catch fisheries, see for example Ogier et al. (2018) *Economic and Social Assessment of Tasmanian Fisheries 2016/17*, pp. 11, 21, http://www.imas.utas.edu.au/__data/assets/pdf_file/0007/1144582/EconSocial-Assessment-Tasmanian-Fisheries-2016-17.pdf

²⁴ Tassal Group (2018) *Annual Report 2018*, p. 44, <http://tassalgroup.com.au/investors/reports/annual-reports/>

²⁵ Clark (2014) *Fishy future for former forestry town*, <https://www.news.com.au/national/tasmania/tassal-reels-in-38m-in-federal-funds-for-fish-protein-and-oil-facility-at-triabunna/news-story/51c70990ae36a60bda0b4698fc9107e8#.nr9xy>

²⁶ Huon Aquaculture (2018) *Annual Report 2018*, p. 56

²⁷ Huon Aquaculture (2018) *Annual Report 2018*, p. 93

²⁸ Slessor (2015) *\$12m factory creates jobs*, <https://www.theadvocate.com.au/story/3189375/12m-factory-creates-jobs/>

²⁹ DPIPW (n.d.) *Sustainable industry growth plan for the salmon industry*, p. 21, <https://dpiwwe.tas.gov.au/Documents/salmonplan.pdf>

³⁰ BioMar (2017) *New Factory in Tasmania*, <https://www.biomar.com/en/australia/articles/biomar-to-establish-new-factory-in-tasmania/>

manufacturer, and already supplies the Tasmanian market from its Chile and Scotland factories.³¹

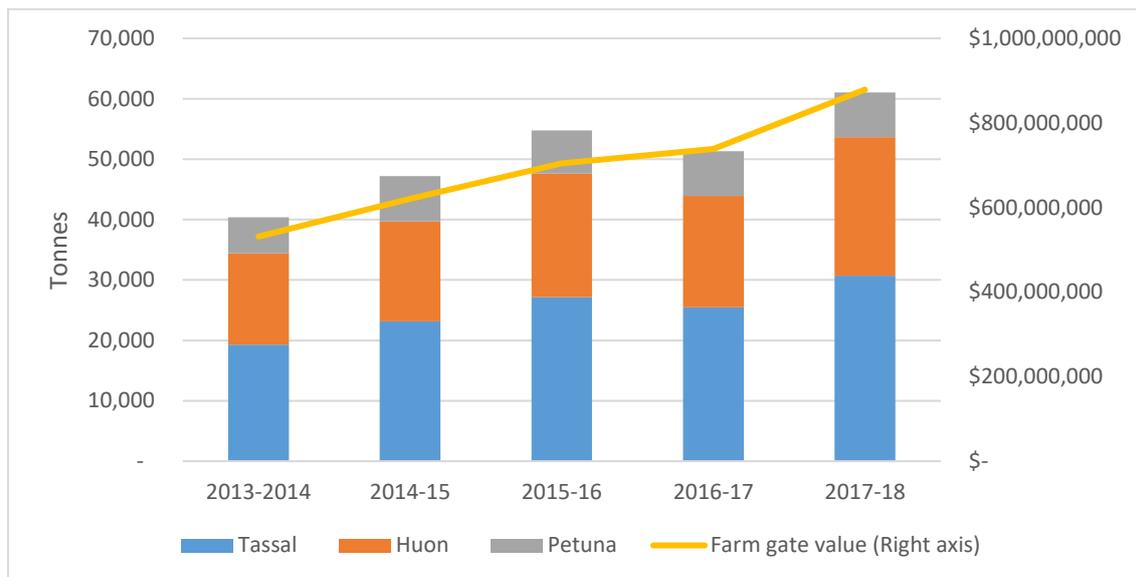
Between the Tassal and Huon grants and the BioMar facility, this represents about \$9.3 million in quantifiable state and federal government subsidies to the salmon industry in the two years 2017 and 2018.

³¹ Grain Central (2018) *BioMar eyes late 2019 opening for Tasmanian aquafeed plant*, <https://www.graincentral.com/trade/biomar-eyes-late-2019-opening-for-tasmanian-aquafeed-plant/>;
The Advocate (2019) *Wesley Vale's \$56m aqua feed plant to start recruiting workers soon*, <https://www.theadvocate.com.au/story/6185647/fish-food-factory-open-day/>

Production, income and taxes

Production of salmon has increased by more than 50% in the last five years, both in terms of tonnes produced and total value. Figure 2 below shows this increase and the production shares of the three main companies:

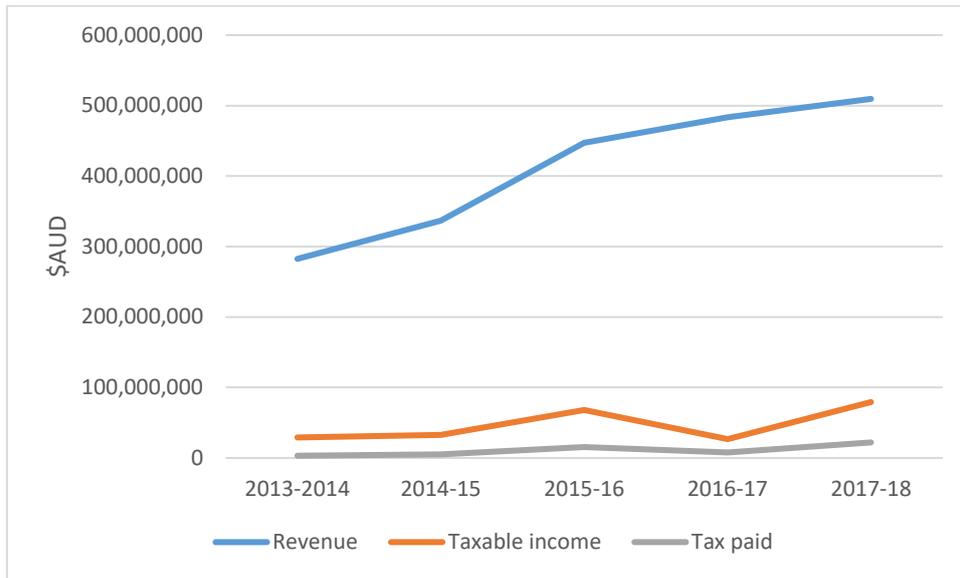
Figure 2: Tasmanian salmon production by company 2013-14 to 2017-18



Sources: Company annual reports; ABARES (2017, 2018) *Fisheries and aquaculture statistics*; author calculations. Note: Petuna do not report volumes, here calculated as ABARES total production estimate less reported totals for Tassal and Huon.

Figure 2 shows that in 2013–14, the industry produced 40,405 tonnes of salmon. By 2017–18, this had grown to 61,033 tonnes. Reflecting their growth in production, the industry has grown substantially and has made large profits. Figure 3 below shows total income, taxable income and tax paid by Tassal over the last five years:

Figure 3: Tassal income and tax 2013-14 to 2017-18

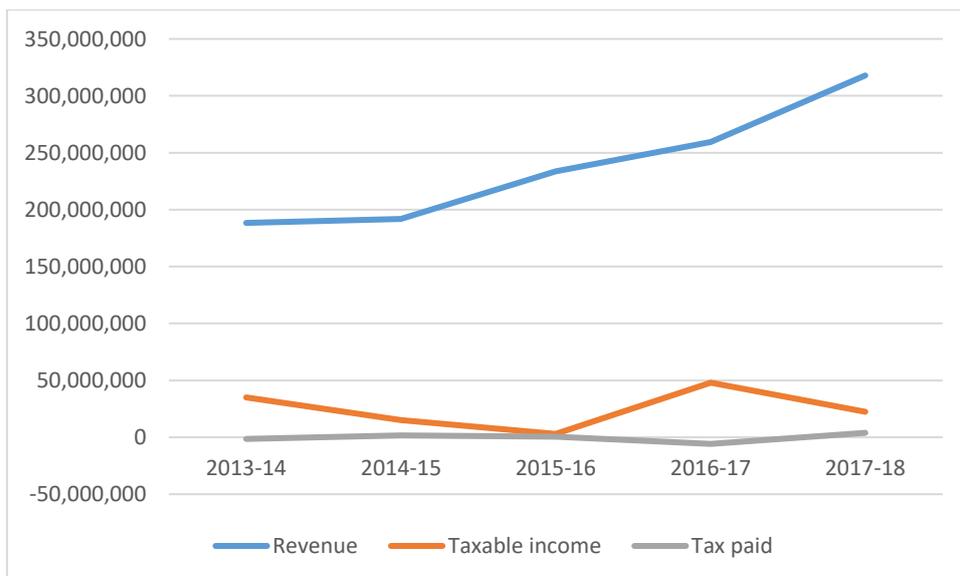


Sources: ATO corporate tax transparency, Tassal (2018) Annual report

Figure 3 shows that over the last five years, Tassal had income of just over \$2 billion, including taxable income of \$236 million. On that taxable income, Tassal paid \$54 million, or an effective tax rate of about 23%.

Over the same five-year period, Huon had income of \$1.2 billion, including taxable income of \$124 million – as shown in Figure 4. Huon received a net \$1 million tax refund over the period.

Figure 4: Huon income and tax 2013-14 to 2017-18



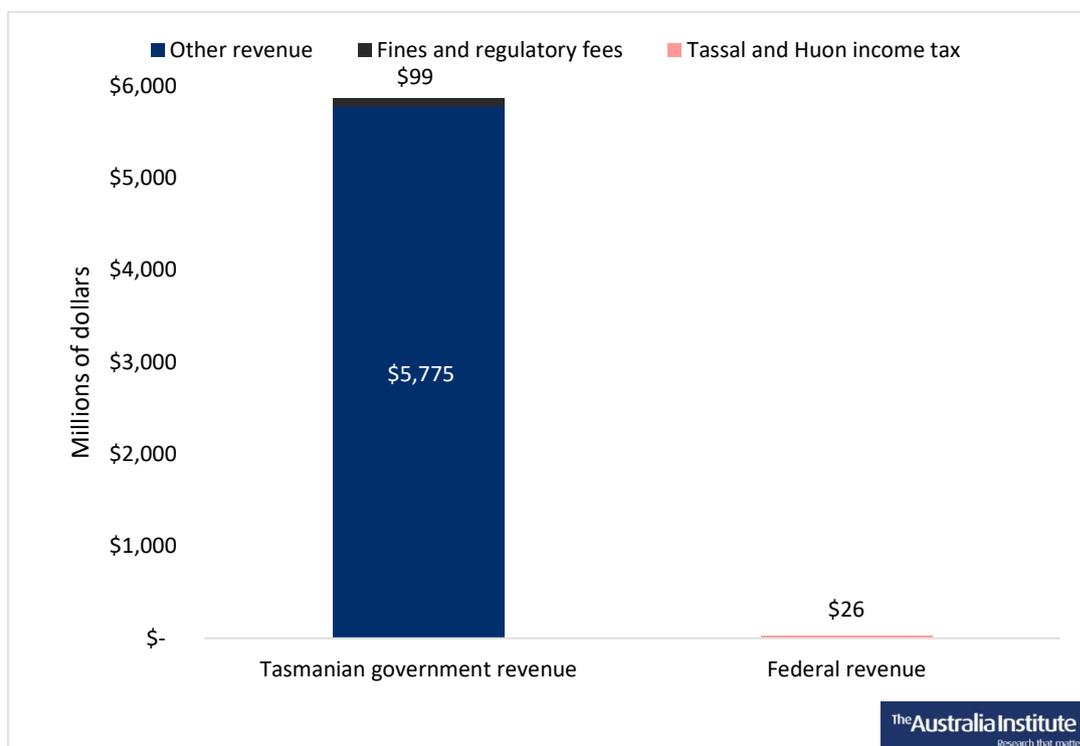
Sources: Huon annual reports, author calculations

We estimate that Petuna’s revenue over the same period was \$512 million. This is Petuna’s production estimate in Figure 2 over the five years (35,343 tonnes) multiplied by the average revenue per tonne for Tassal and Huon. Based on Huon and Tassal’s taxable income and tax paid per tonne we estimate the company would have made \$56.8 million in taxable income and paid \$8.4 million in corporate tax.

In total, we estimate over this five-year period the Tasmanian salmon industry sold 255,000 tonnes of fish, worth \$3.8 billion. This revenue produced \$416 million in taxable income, an approximation of profit. \$64 million in tax was paid, equal to 2% of production value and 15% of taxable income.

While income taxes are paid to the federal government rather than the state government, for the purposes of illustration the \$26 million in income tax paid by Huon and Tassal in 2018 represents 0.4% of Tasmanian government revenue. The Tasmanian government makes about four times as much from fines and regulatory fees as the Federal Government makes in income tax from the two largest salmon farmers in Tasmania.³²

Figure 5: Comparison of revenue sources



Sources: Tasmanian Budget Papers, company annual reports

³² Tasmanian Government (2018) *2017-18 Tasmanian Budget - Budget Paper Number 1*, pp. 6, 10, <https://www.treasury.tas.gov.au/budget-and-financial-management/2018-19-tasmanian-budget/budget-papers-archive/2017-18-tasmanian-budget>

OWNERSHIP

From their annual reports, it appears that Tassal's largest shareholders are institutional investors, while Huon is majority owned by its (Tasmania-based) founders.³³

According to the Tassal Group share registry as of February 2017, 366 shareholders (4.3% of all shareholders) had Tasmanian postcodes, and together these Tasmanians owned 1.1% of all Tassal shares.

In 2010, global seafood enterprise Sealord Group bought 50% of privately-owned Petuna from Devonport-based founders Peter and Una Rockliff. The Rockliff family are still joint owners,³⁴ although it is unclear if they still own a 50% share.

³³ Huon Aquaculture (2017) *Annual report 2017*, p. 103; Tassal (2017) *Annual report 2017*, p. 81

³⁴ Petuna Seafood (n.d.) *Our Story - Peter and Una Rockliff*, <http://www.petuna.com.au/our-story/>

State and local payments

More publicly-available information on the salmon industry's payments to government would allow for a clearer picture of the industry. However, information that is public allows us to estimate that the salmon industry pays the state government about \$920,000 in annual lease and licence fees on its fish farm leases.

We estimate that industry levies amount to \$1.1 million, as well as \$500,000–\$730,000 for the EPA Tasmania levy.

Public information about payments from the salmon industry to the government is scattered, and in some cases incomplete. The number of leases, and the hectares that they cover, is known, and in some cases can be compared to lease, licence and levy fees. However, it is difficult to tell if these represent the total payment because it is not always clear if some leases have been grandfathered, whether all leases are currently licensed, and so on.

LEASES AND LICENCES

In Tasmania, lessees of finfish farms (including salmonids) must pay annual lease fees, which currently consist of an annual fee of \$2,673 plus \$302.94 per hectare.³⁵ Since Tasmania has 44 leases occupying a total of 2,257 hectares,³⁶ this would result in an annual lease fee of \$801,348 for the entire industry.

Marine farming licence fees are \$2,765 per lease for one species of finfish (e.g. *Salmo salar*, the Atlantic salmon).³⁷ Not all of Tasmania's 44 leases necessarily have current licences. However, if assuming they did, licence fees would amount to \$121,660 per year for the industry.

³⁵ ABLIS (2019) *Marine Farming Lease - Tasmania*, <https://ablis.business.gov.au/>; Tasmanian Government (2019) *Gazette No. 21,870*, p. 143, <http://www.gazette.tas.gov.au/?a=449648>

³⁶ EPA Tasmania (n.d.) *Environmental management*, <https://epa.tas.gov.au/regulation/salmon-aquaculture/environmental-management>

³⁷ Trout is also farmed in some cases, but adding an additional finfish species to a lease only costs \$158. DPIPWE (2018) *Application for the grant of a Marine Farming Licence in respect to a lease over an area in state waters*, <https://dpiuwe.tas.gov.au/Documents/Licence-WB%20GRANT%20MF%20Application.pdf>

The estimated total lease and licence fees of \$923,008 represents about 0.1% (one-thousandth) of the total farmgate production of the salmon industry in Tasmania, and 0.02% of total state revenue.

Other jurisdictions with large salmon farming operations use different licensing and leasing structures. For example, Norway's licensing system consists of perpetual licences that are limited by biomass. Each salmon farming licence allows the holder to farm up to 780 tonnes of salmon at one time (the "maximum allowed biomass" or MAB). New licences are made available infrequently. Since 2017, production capacity will rise or fall on a biennial basis depending on sea lice levels in the area.³⁸

An auction of licences last year raised NOK 2.9 billion (\$468 million) for licences covering 14,945 tonnes of MAB.³⁹ Since 2016 in Norway, 80% of the revenue from the growth in the salmon industry is allocated to municipalities with aquaculture operations.⁴⁰

In Tasmania, salmon stocking densities of between 10 and 28 tonnes per hectare have been reported.⁴¹ If the 2,257 hectares of salmon leases in Tasmania leases were valued the same way as the Norwegian biomass licences, they would be worth between \$707 million and \$2 billion at government auction.

Another advantage of the Norwegian system is its transparency, with public disclosure of areas, winning bidders, volume purchased and price per tonne – as shown in Figure 6, below. Transparent and readily-available details about payments by industry should be available for all jurisdictions.

³⁸ Marine Harvest (2017) *Salmon Farming Industry Handbook 2017*, p. 70, <https://web.archive.org/web/20180219002701/http://marineharvest.com/globalassets/investors/handbook/salmon-industry-handbook-2017.pdf>

³⁹ FishFarmingExpert.com (2018) *Norwegian salmon licence auctions raise NOK2.9bn*, <https://www.fishfarmingexpert.com/article/norwegian-salmon-licence-auctions-raise-nok29bn/>

⁴⁰ Olsen (2018) *The salmon license auction completed*, <https://salmonbusiness.com/the-salmon-license-auction-completed/>

⁴¹ Meldrum-Hanna & Balendra (2017) *Salmon farmer accuses government of failing to protect World Heritage area*, <https://www.abc.net.au/news/2017-02-06/huon-aquaculture-lawsuit-tasmania-government-macquarie-harbour/8244330>; Ryan & Creswell (2017) *Tassal Group Limited: FY2017 Roadshow*, p. 7, <http://www.tassal.com.au/wp-content/uploads/2017/09/1711197-FY2017-investor-relations-roadshow.pdf>

It is worth noting that Norway has other taxes and fees on its salmon industry and is considering introducing more; the public benefit to Norwegians from the salmon industry is not limited to the perpetual biomass licences.⁴²

Figure 6: Example of public disclosures of winning bids, Norway

FINAL LIST:

Area of production	Bidder	Volume tonnage	Price per tonn in euros
1: Swedish border to Jæren	EIDE FJORDBRUK AS	100	13,941
	MARINE HARVEST NORWAY AS	493	13,941
7: Nord-Trøndelag with Bindal	EMILSEN FISK AS	400	23,868
	NORSK HAVBRUKSSENTER OPPDRETT AS	265	23,868
	MIDT NORSK HAVBRUK AS	600	22,292
	MIDT NORSK HAVBRUK AS	180	22,079
	SALMAR FARMING AS	183	22,292
	SALMAR FARMING AS	260	22,079
8: Helgeland to Bodø	LOVUNDLAKS AS	1,850	26,623
	EDELFAARM AS	604	22,219
9: Vestfjorden and Vesterålen	BALLANGEN SJØFARM AS	200	24,510
	BALLANGEN SJØFARM AS	50	24,096
	CERMAQ NORWAY AS	2,000	24,510
	CERMAQ NORWAY AS	30	24,096
	EIDSEJORD SJØFARM AS	200	24,510
	LOFOTEN SJØPRODUKTER AS	53	24,510
	LOFOTEN SJØPRODUKTER AS	20	24,096
LOFOTEN SJØPRODUKTER AS	32	24,510	

Source: Olsen (2018) *The salmon license auction completed*, <https://salmonbusiness.com/the-salmon-license-auction-completed/>

⁴² Jensen (2017) *New tax slapped on Norwegian salmon*, <https://www.fishfarmingexpert.com/article/new-tax-slapped-on-norwegian-salmon/>; KPMG Law (2019) *Taxation of aquaculture – a country overview*, pp. 19–20, <https://home.kpmg/no/nb/home/nyheter-og-innsikt/2019/05/taxation-of-aquaculture.html>; SalmonBusiness (2019) *Controversial salmon farm resource rent tax scrapped by Parliament*, <https://salmonbusiness.com/controversial-salmon-farm-resource-rent-tax-scrapped-by-parliament/>

LEVIES

Three levies apply to salmon farms in Tasmania. The Tasmanian Seafood Industry Council levy is \$442.40 per lease. The Salmon Industry Planning Levy is \$474 per hectare and the EPA levy is \$322.32 per hectare. This would represent annual levies of \$19,465 for the Seafood Industry Council, \$1,069,818 for the Salmon Industry Planning Levy and \$727,476 for the EPA levy – provided that all leases have current licences. The latest EPA Tasmania annual report (financial year 2017–18) gives the levy's size as \$500,000 for that year, or 3.8% of EPA Tasmania's operating budget.⁴³

The Seafood Industry Council and Salmon Industry Planning levies are primarily for the direct benefit of the industry. The planning levy is intended to help fund “the assessment of industry proposals, tactical research and scientific projects specifically focused on expanding industry production”.⁴⁴

COUNCIL RATES

Councils do not charge rates on marine farming leases. After West Coast Council considered charging rates on salmon aquaculture leases in Macquarie Harbour, the Tasmanian Parliament legislated in 2017 to prohibit councils from charging rates on marine farms. Land-based salmon farms are still charged rates.⁴⁵

In June 2019, the West Coast Council significantly increasing council rates for the salmon industry's on-land assets, especially Strahan's “aquaculture hub”. The rates will go from “several thousand dollars” to about \$70,000 per year.⁴⁶ In response, the

⁴³ EPA Tasmania (2018) *Annual report 2017-18*, p. 41,

<https://epa.tas.gov.au/Documents/EPA%20Annual%20Report%202017-18.pdf>

⁴⁴ Rockliff (2016) *Supporting the growth of salmon farming*,

http://www.premier.tas.gov.au/releases/supporting_the_growth_of_salmon_farming

⁴⁵ Department of Premier and Cabinet (n.d.) *Local Government Amendment (Rates) Act 2017*,

http://www.dpac.tas.gov.au/divisions/local_government/legislation/draft_local_government_amendment_rates_bill_2017; Whiting (2017) *Push to exempt marine farms from council rates*,

<https://www.abc.net.au/news/2017-04-05/legal-move-to-free-salmon-companies-from-paying-council-rates/8416860>;

Woodruff (2017) *Mates' rates just smell fishy*,

<https://www.themercury.com.au/news/opinion/talking-point-mates-rates-just-smell-fishy/news-story/e693b3b16f5b509e162dbd5818d4d6bd>

⁴⁶ Ford (2019) *West Coast Council draft budget targets salmon farmers*,

<https://www.theadvocate.com.au/story/6239544/west-coast-council-draft-budget-targets-salmon-farmers/>

Tasmanian Salmonid Growers Association called on the state government to “intervene in this immediately”, and may consider legal appeals.⁴⁷

Australia Institute polling shows that 70% of Tasmanians think that intensive fish farms should pay rates to local governments.⁴⁸

ROYALTIES

Some fish harvests in Tasmania, particularly abalone fishing, require royalty payments. The abalone royalty rate varies depending on the deed, but new deeds have a royalty of 7% of average beach price.⁴⁹ It should be noted that because the public funds fisheries management, research, compliance and the crown prosecutor, public costs may exceed the public benefit from the abalone royalty.⁵⁰

Royalty payments are intended to compensate the community for the harvesting of a public resource.⁵¹ As such, aquaculture operations such as salmon farming are not expected to pay them as they provide their own fish. However, if the public resource were conceived of as a community’s waterways, rather than a community’s fish, then the intellectual case for a royalty on aquaculture operations could be made.

⁴⁷ Ford (2019) *West Coast salmon farming rates hike might end up in court*, <https://www.theadvocate.com.au/story/6242285/west-coast-salmon-farming-rates-hike-might-end-up-in-court/>

⁴⁸ The Australia Institute (2016) *Intensive salmon farming in Tasmania*, p. 6, <http://www.tai.org.au/content/intensive-salmon-farming-tasmania>

⁴⁹ Ogier et al. (2018) *Economic and Social Assessment of Tasmanian Fisheries 2016/17*, pp. 20–21

⁵⁰ Ogier et al. (2018) *Economic and Social Assessment of Tasmanian Fisheries 2016/17*, p. 11

⁵¹ Ogier et al. (2018) *Economic and Social Assessment of Tasmanian Fisheries 2016/17*, pp. 20–21

Conclusion

Political leaders have overstated the importance of the salmon industry for the state's economy. Salmon farms should be considered on their own economic, environmental and social merits, instead of the industry being treated as essential or as a major part of the Tasmanian economy. The industry is accounts for around 1% of the state's employment and just 1 to 2% of Gross State Product.

Tasmanian salmon companies have gone through a period of growth. This growth has not led to a commensurate growth in returns to the state government, or the communities that bear the environmental costs of the industry.