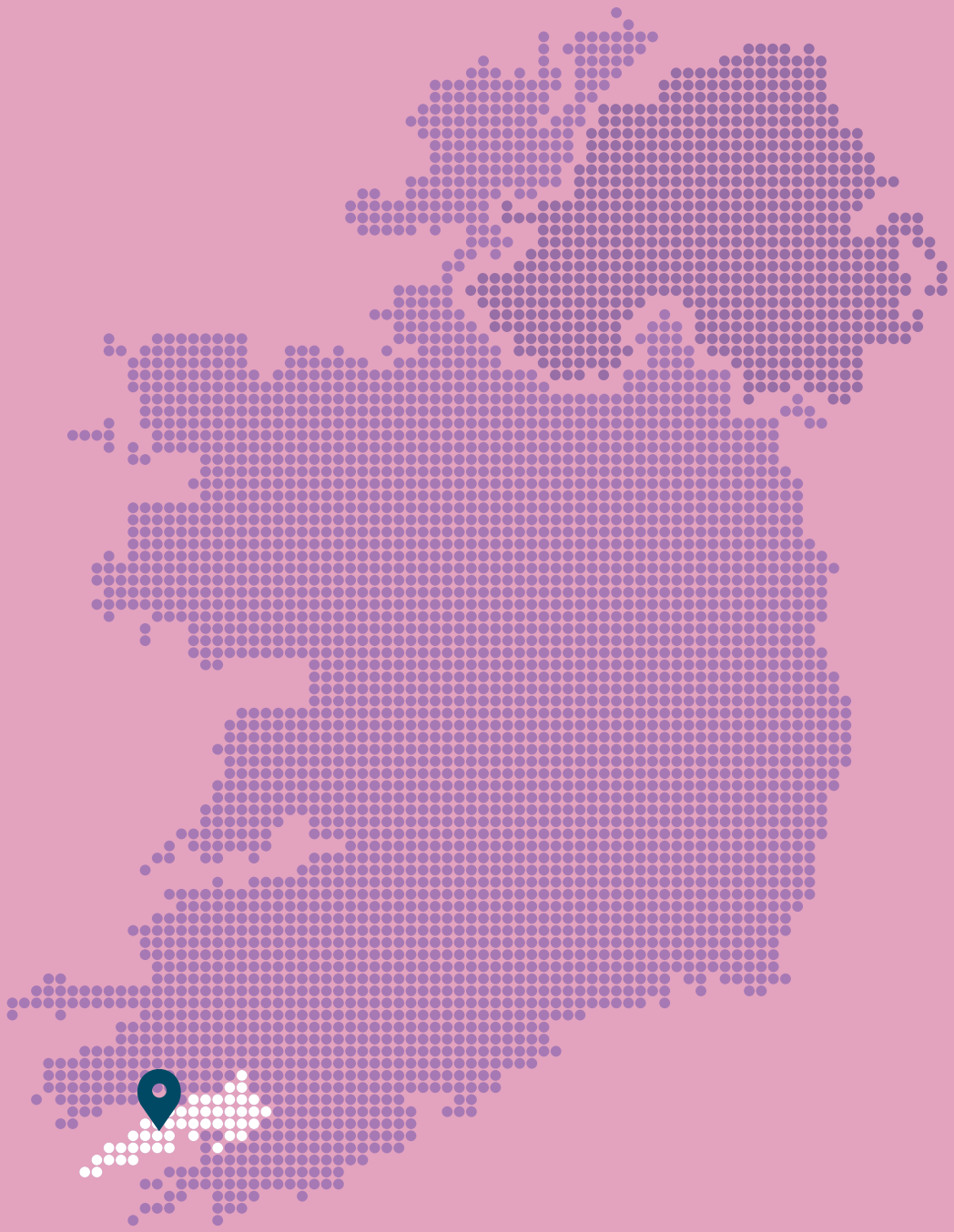
The Economic Impact of the Seafood Sector: Castletownbere

May 2025



An Roinn Talmhaíochta, Bia agus Mara
Department of Agriculture, Food and the Marine

Arna chomhchistiú ag an Aontas Eorpach
Co-Funded by the European Union

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May 2025

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Foreword

The Economic Impact of the Seafood Sector: Castletownbere

The 2024 evaluation of Castletownbere's seafood sector provides, for the first time, a five-year comparative analysis, allowing us to assess the sector's trends, resilience, and economic contributions. Building on the initial 2019 study, this report tracks changes in the industry's direct, indirect, and induced economic effects, highlighting its evolving role at the local, regional, and national levels.

Castletownbere is Ireland's second-largest seafood port, with a high volume of seafood landings annually. Located on the Beara Peninsula in West Cork, the port is a key economic anchor in an area where agricultural land is classified as poor, and where transport connectivity remains a challenge. Its remote location, 125 km from Cork City, 317 km from Rosslare, and 380 km from Dublin, reinforces the strategic importance of the seafood sector in sustaining local employment and economic activity. While the natural beauty of the peninsula attracts tourists during parts of the year, Castletownbere's poor agricultural land and long distance from major urban centres result in the seafood sector being an integral driver of the local economy.

The findings of this report highlight the continued significance of the seafood sector to the Castletownbere economy. In 2023, direct seafood activity at the port generated over €151 million in turnover and supported 835 direct jobs. The fish processing sector remains the primary driver of economic activity, with the commercial fishing and aquaculture industries also making substantial contributions.

Over the last five years, the direct seafood sector in Castletownbere has faced significant economic challenges, including Brexit, the Covid-19 pandemic, inflationary pressures, and changing quota allocations. These factors have led to a 28% decline in direct GVA, a 12% decline in employment, and an 8% decrease in wages. However, the wider seafood sector has demonstrated resilience, with GVA across the entire port seafood economy declining by just 6%, employment increasing by 5%, and wages remaining relatively stable.

Despite the challenges posed by regulatory changes and rising operational costs, the sector's multiplier effect on the wider economy has strengthened, driven by increased supply chain activity and indirect employment generation. The overall GVA multiplier effect of the seafood sector has increased over the period from 1.74 to 2.16 due to increased supply chain spending. In total, the seafood sector at Castletownbere supports 1,520 jobs and contributes €107.9 million in GVA across the South West economy.

This report provides critical insights into the evolving dynamics of the seafood sector in Castletownbere, offering a valuable foundation for future policy decisions, investment strategies, and industry development. The findings highlight the need for continued support and strategic planning to ensure that Castletownbere remains a vibrant and sustainable hub for Ireland's seafood industry in the years ahead.

Executive summary

The seafood sector at the port

The seafood sector makes an important contribution to the Castletownbere economy. In 2023, direct seafood activity at the port generated €151.4 million in turnover, supporting 835 direct jobs. Fish processing is the largest seafood sub-sector at the port, generating €67.3 million in turnover, followed by commercial fishing (€59.3 million) and aquaculture (€24.9 million). When translated into Gross Value Added (GVA), the overall seafood sector made a €51.8 million direct contribution to the local port economy.[1]

This survey explores the characteristics of firms operating in this sector. In general, firms are typically well-established, having operated for more than 10 years. Seafood businesses operating in Castletownbere typically invested less in capital relative to some of the other main ports across Ireland in 2023, although fish processing somewhat bucked the trend. The workforce tended to originate from the county, and the end-market for local seafood sales tended to be locally focused, with 70% of sales occurring within Ireland. In terms of performance, the majority of turnover tended to be either down or relatively stable year-on-year.

An analysis of the survey results allows the port's seafood sector value within the regional economy to be quantified. Once the indirect and induced effects were calculated, it was estimated that the total economic contribution of the seafood sector at Castletownbere equated to €107.9 million across the South West economy in 2023. The port's seafood sector also supported more than 1,520 jobs across the region. This activity is estimated to have created a fiscal surplus of €10.8 million. When compared to the results of the last study in 2018, Castletownbere experienced a real terms decline in GVA and gross wages of an estimated 6.1% and 0.2%, respectively. This was accompanied by a growth in employment of 4.8%. The fall in GVA and gross wages can be attributed to a range of factors such as the salmon farming being reallocated to a number of different ports instead of solely Castletownbere as was the case in the last study. Furthermore, turnover estimates provided by BIM were considerably lower than they were in the 2018 study for several large seafood operators. However, these falls were offset by strong impacts in the indirect channel, signalling increased supply chain spending due to increased costs across seafood businesses, particularly in the fish processing sub-sector.

€51.8m

Direct GVA in 2023

The seafood sector makes a significant contribution within the local port economy.

€107.9m

Total GVA contribution to the South West in 2023

The seafood sector makes a significant contribution to the wider regional economy.

1 Gross Value Added (GVA) is the difference between the value of goods and services produced by a business or a sector, and the cost of raw materials and other inputs which are used in production. It is essentially a measure of the value added to the services or products provided by a sector or firm.

Table 1. The estimated benefits of the port seafood sector, South West, 2023

Ports seafood sector	South-West		
	GVA (€m)	Employment	Gross wages (€m)
Direct	51.8	835	22.6
Indirect	44.5	590	17.0
Induced	11.6	95	4.4
Total	**107.9**	**1,520**	**44.0**

Source: *Oxford Economics, Perceptive Insight, CSO*
Note: *May not sum due to rounding*

The role of the individual seafood sub-sectors

The analysis of the seafood sector at the port produced the following headline findings throughout the region (which again include the combined direct, indirect and induced impacts).[2]

- Activity in the commercial fishing sub-sector has been estimated to sustain 720 jobs, €22.1 million of gross wages and €53.1 million of GVA;
- Activity in the aquaculture sub-sector has been estimated to sustain 205 jobs, €8 million of gross wages and €21.8 million of GVA;
- Activity in the fish processing sub-sector has been estimated to sustain 685 jobs, €17.8 million of gross wages and €43 million of GVA.

Socio-economic characteristics

The local economy faces significant challenges. Generally, it has an older population and therefore a below-average share of working-age residents. The working-age population is growing more slowly than the regional and national rates, meaning it will be increasingly difficult for growing firms to source labour. However, the qualification attainment profile of the local population is relatively more aligned with employment opportunities presented within the agriculture, forestry and fishing sector.

As a result, the seafood sector is likely to continue to play a significant role in the local port economy through its provision of direct jobs, supply chain spending in local businesses and the consumer spending it supports. Looking forward, a vibrant and growing local seafood sector is likely to be important for the economic and demographic health of the local area.

2 Summing the benefits of all three elements within our definition of the seafood sector (fishing, aquaculture and processing) would overestimate the indirect and induced impacts, and as a result, overall impacts. This is because the supply chain of the processing sub-sector will likely contain a proportion of the port's fishing sub-sector and its supply chain. To get the direct totals (for employment, GVA and gross wages), all the three sub-sectors were added. However, for the indirect and induced totals, those of the processing sub-sector with a proportionate share of the fishing and aquaculture are summed (according to the proportion of sales not destined for local processors and informed by the interview process). The remainder of the fishing and aquaculture indirect and induced impacts will already be accounted for within that of the processors.

1. Introduction

1.1 About the study

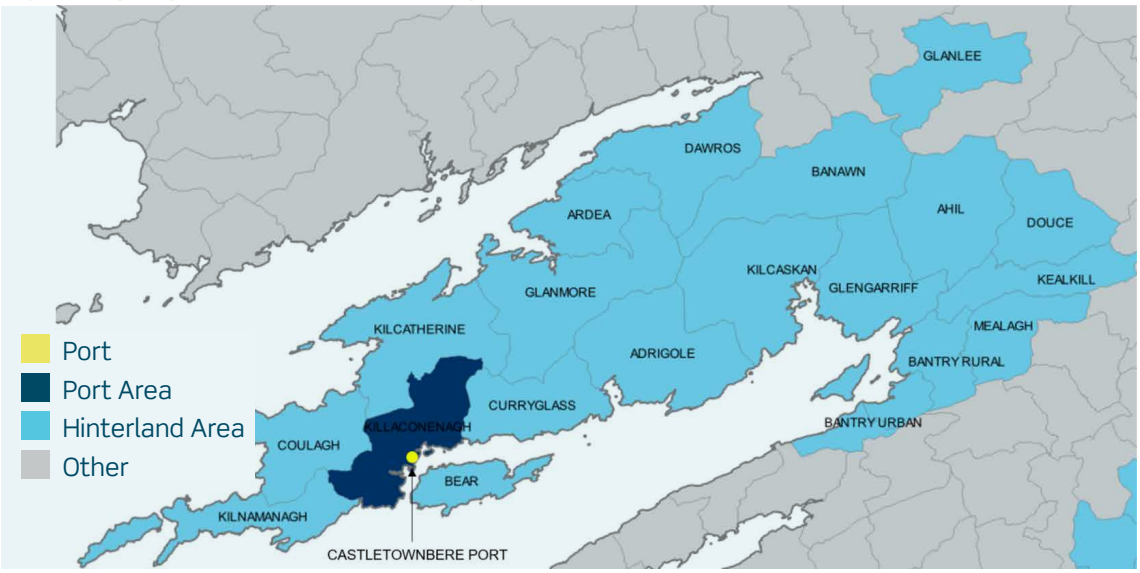
The Irish seafood sector is an important component of the Irish economy. It is even more important to coastal communities around the country given its concentration at Ireland's ports, and the relatively lower level of alternative economic activity in these economies. In addition, as economic and employment growth is increasingly driven by office-based activity which favours urban areas, the seafood sector's role in providing labour market opportunities, wages and local demand in these local areas is arguable rising.

Against this backdrop, Bord Iascaigh Mhara (BIM) commissioned Oxford Economics and Perceptive Insight to estimate the economic contribution of the seafood sector in ten of Ireland's ports.

1.2 The port area

Castletownbere port is located on the coast of Co. Cork in the South West region. In this report the local port economy is defined as the District Electoral Divisions (DED) of Killaconeanagh and those surrounding it, which constitute its hinterland — informed by BIM and shown in the below figure.

Fig. 1. Map of port area within the study



To inform the analysis, a comprehensive seafood-related survey exercise was carried out across Ireland's main ports. The researchers worked closely with BIM in order to understand the seafood population at each of the 10 ports. The market research firm Perceptive Insight then collected information concerning the characteristics of the local seafood sector through both telephone and electronic surveys.

A total of 448 unique responses were recorded from seafood operators based in the 10 port areas — a response rate of around 50%, relative to the known seafood population. For seafood businesses that did not return a response, the research relied on turnover and employment estimates based on survey responses of seafood businesses of a same size. The study also draws on published data, where available, to better understand the sectoral composition of coastal areas within the country. Appendix 1 of this report includes a summary discussion of the economic challenges facing the local port economy. Peripheral economies tend to face significant challenges from which Castletownbere is not exempt.

Box 1: Introducing economic impact analysis

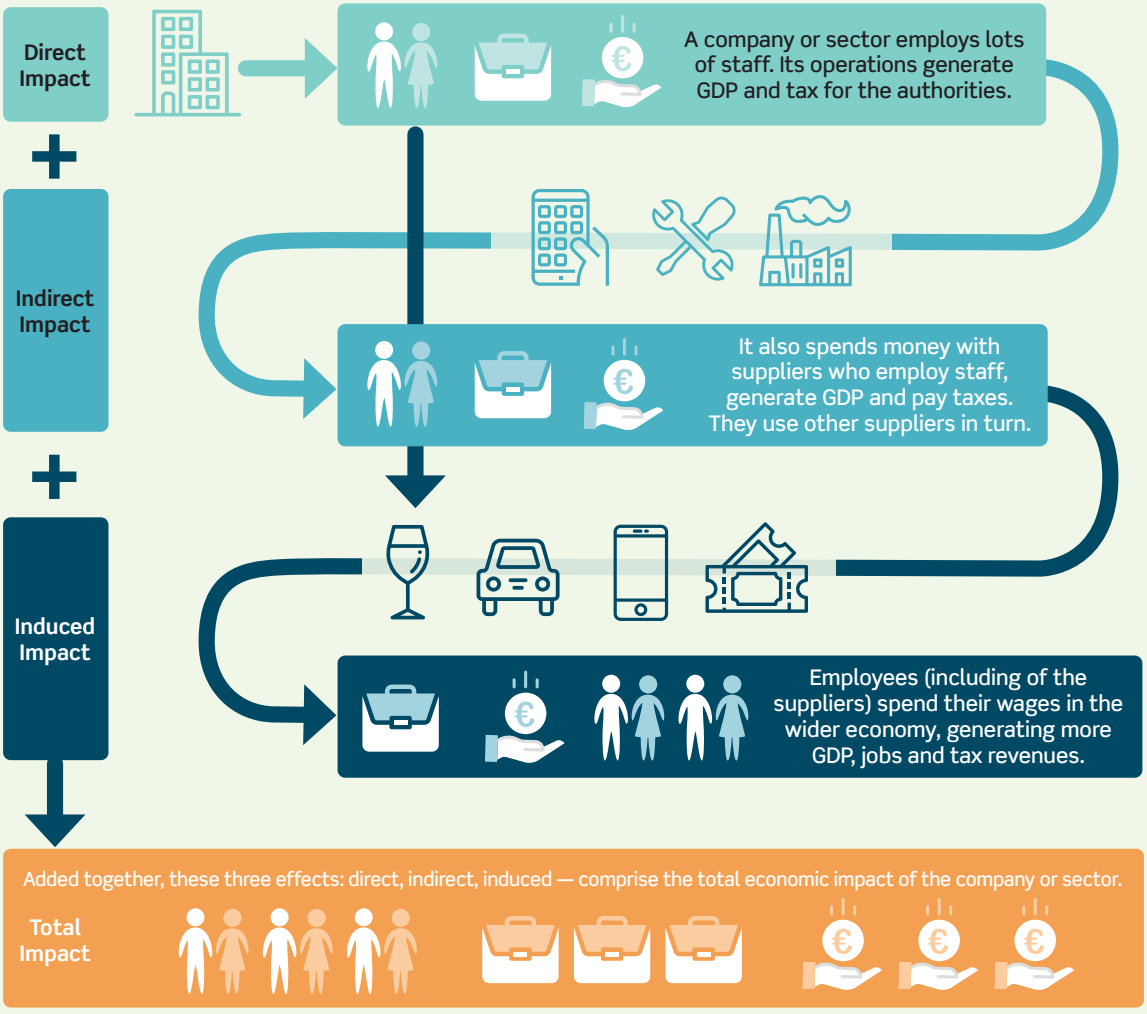
The economic impact of a sector is measured using a standard means of analysis called an economic impact assessment. The report quantifies the three 'core' channels of impact that comprise an organisation/sector's 'economic footprint':

- **Direct impact**, which is the economic activity the seafood sector generates because of its operations;
- **Indirect impact**, or supply chain impact, that occurs because the sector buys inputs of goods and services from Irish businesses;
- **Induced impact**, which relates to the wider economic benefits that arise when employees of the local seafood sector and its supply chain spend their wages in the consumer economy, for example in local retail establishments.

These channels of impact are analysed using three core metrics:

- **Employment**, measured on a Full-Time Equivalent (FTE) headcount basis. This is composed of both full-time employment and a proportion of part-time working component — where two part-time roles equate to a full-time position;
- **Gross value added (GVA)** contribution to GDP;
- **Tax receipts** generated by the Irish activity and employment supported by the seafood sector.

Fig. 2. Economic impact assessment



1.3 The key elements of the local seafood sector

This paper presents our estimates of the size of the local seafood sector and how it impacts the regional economy. The analysis therefore estimates the direct activity associated with the commercial fishing, aquaculture and fish processing sub-sectors at the port by drawing on the survey findings and information held by BIM. The wider impacts within the local NUTS3 region are then estimated. These wider impacts include those associated with the seafood sector's supply chain and the consumer spending of those employed as a result of the direct and indirect activity — see Box 1 for more detail concerning the methodology.

The analysis is also careful to identify where the three different seafood sub-sectors appear in the supply chains of the other sub-sectors. The most obvious example is commercial fishing appearing within the supply chain of fish processing. The analysis has isolated the benefits to avoid instances of double counting (see Appendix 2 for further information concerning the model approach).

1.4 Report structure

This report breaks down the characteristics of the collective seafood sector within the port area. It then goes on to show the economic impact this activity creates across the South West economy.

The report takes the following structure:

- An analysis of the seafood sector within the local port economy;
- A breakdown of the economic benefits associated with the port's seafood sector across the regional economy;
- A summary of the overall benefit associated with the port's seafood sector at the regional level;
- The conclusions.

2. The seafood sector at the port

2.1 Characteristics of the seafood sector

Commercial fishing forms the largest sub-sector of the seafood sector at Castletownbere. In 2023, it accounted for the largest share of direct value added (GVA) (€29.9 million), ahead of aquaculture (€12.9 million) and fish processing (€9 million). Commercial fishing supports a similarly high proportion of employment, with 515 jobs being directly supported by 109 commercial fishing businesses based out of the port.

By contrast, BIM's data and the survey exercise identified nine seafood businesses in the fish processing sub-sector, and 27 engaged in aquaculture. It also suggested that each of the port's fish processors had an average turnover of over €7.5 million, compared to €0.9 million in aquaculture and €0.5 million in commercial fishing.

Table 2. Headline direct economic contribution of the seafood sector, Castletownbere, 2023

	Turnover (€m)	Jobs	Gross wages (€m)	Seafood operators
Commercial fishing	59.3	515	13.0	109
Aquaculture	24.9	130	4.6	27
Fish processing	67.3	190	5.0	9
Total	**151.4**	**835**	**22.6**	**145**

Source: *Oxford Economics, Perceptive Insight, BIM*
Note: *May not sum due to rounding*

To aid comparison with the 2018 study, the results from that study have been inflated to 2023 prices and are presented here (see Table 3). Commericial fishing turnover fell around 15.2% in real terms with similar falls recorded in employment and gross wages. This was partly due to a general loss of seafood operators in the area but also because of falling turnover, employment and gross wages in firms still in operation.

The aquaculture sector experienced a strong decline of 28.6%, but this is due to some salmon farming operations which were assumed to be fully in Castletownbere in the last study, being spread across several ports in this study (as directed by BIM). While more accurate, this has led to similar decreases in employment and gross wages despite a 12.5% increase in seafood operators.

For fish processing, turnover fell by an estimated 18.5% while employment remained unchanged. This was due to one large employer having their turnover estimate revised downward from the last study (based on information provided by both the company and BIM).

Overall, turnover, employment and gross wages were down 19.1%, 12.1% and 8.1%, respectively, while the number of operators grew by 3.6%.

Table 3. Headline direct economic contribution of the seafood sector (2023 prices), Castletownbere, 2018

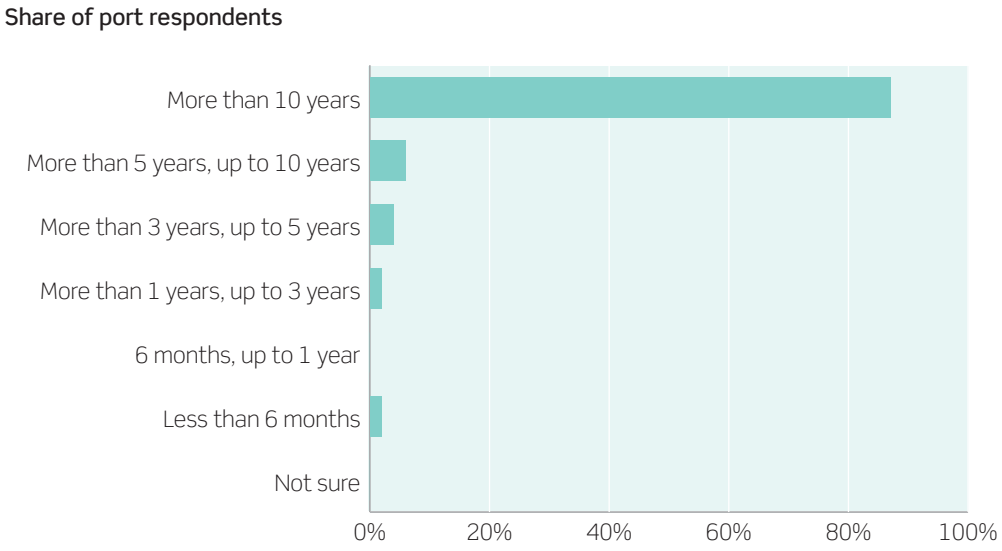
	Turnover (€m)	Jobs	Gross wages (€m)	Seafood operators
Commercial Fishing	69.9	560	14.1	111
Aquaculture	34.9	200	6.2	24
Fish processing	82.5	190	4.3	5
Total	**187.2**	**950**	**24.6**	**140**

Source: *Oxford Economics, Perceptive Insight, BIM*
Note: *May not sum due to rounding*

The survey also provides insight into the profile of businesses operating at the port. Some 54 seafood-related businesses in Castletownbere, 39% of the population, were surveyed. An analysis of these responses allows for the exploration of some of the unique characteristics of the seafood sector within the port area.

The survey results show that seafood businesses within the port tended to be relatively mature and well established. A significant majority (87%) of respondents identified as having operated for more than 10 years in the port area, a rate above the aggregate figure for the ten ports (83%).

Fig. 3. Seafood sector maturity, Castletownbere, 2023



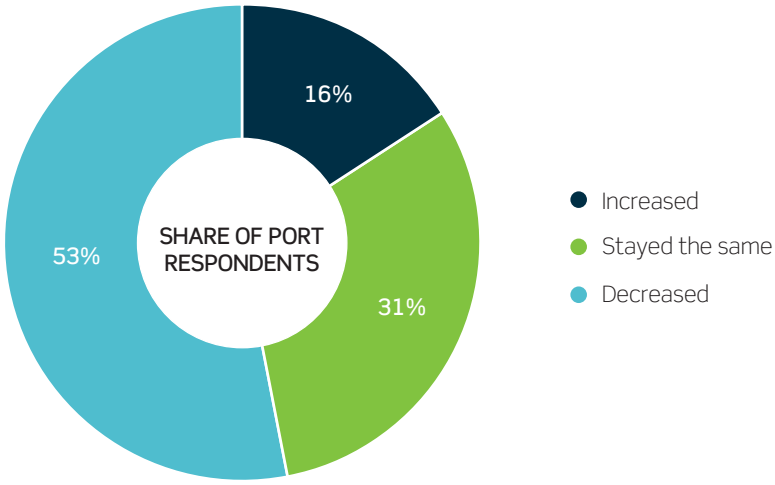
Source: *Oxford Economics, Perceptive Insight*

The survey also explored the recent turnover performance of firms operating in the local seafood sector. More than half of respondents (53%) indicated that turnover had decreased over the previous 12 months, a share similar to the aggregate rate for all ten ports (52%). Around one-third of firms found turnover had remained stable over the previous 12 months and 16% said it had increased, 4% above the aggregate rate.

This contrasts with the results of the previous study when respondents indicated in 2018 that turnover had been relatively stable. At the time, three quarters indicated that it had neither increased nor decreased in that equivalent period. However, 18% of firms had seen turnover decrease compared to 7% who reported an increase.

While the sample size is not sufficient to provide a robust breakdown of turnover performance across each of the seafood sub-sectors, the survey indicates that changes in turnover has been more volatile within aquaculture.

Fig. 4. Changes to turnover in the past 12 months, Castletownbere, 2023

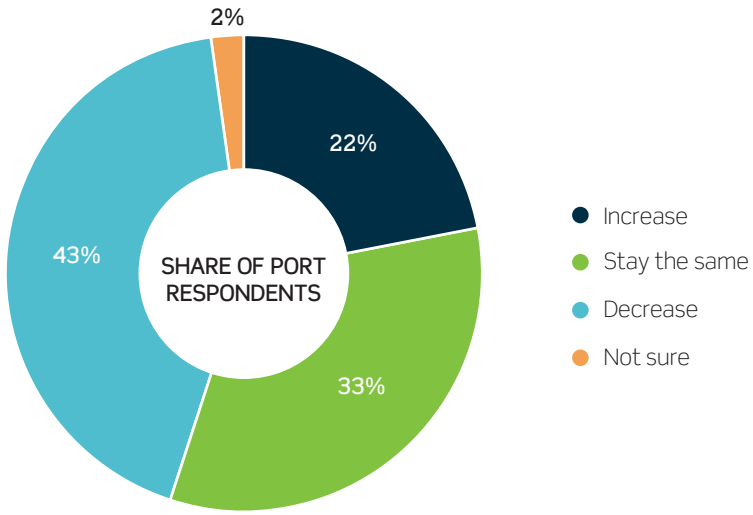


Source: *Oxford Economics, Perceptive Insight*

When asked about the next 12 months, seafood businesses were slightly more optimistic with 55% expecting turnover to grow or stay unchanged. Nevertheless, a sizeable proportion (43%) expected turnover to decrease.

In contrast to the previous study, a greater share of businesses expected turnover to remain unchanged in 2019 (80%) in comparison to those who saw turnover unchanged within 2018 (75%). Furthermore, a greater share of respondents said they expected their turnover to increase (10%) rather than decrease (8%) in 2019, a reversal of the observed pattern over the previous year.

Fig. 5. Anticipated changes to turnover, Castletownbere, 2023



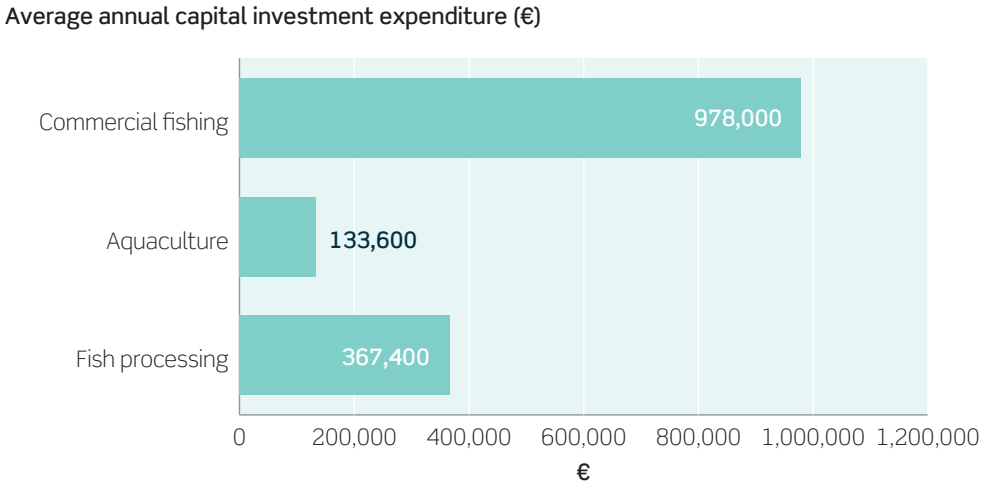
Source: *Oxford Economics, Perceptive Insight*

Improving turnover is often linked to investment: improving the quantity and/or quality of capital available to the workforce can enable improved productivity, lower costs and ultimately higher turnover. The survey indicates that 36% of firms at Castletownbere made capital investments in the previous year, a rate on par with the ten ports as a whole (37%).

Of those respondents who did engage in capital investment, their average spend tended to be relatively high. Respondents at Castletownbere spent on average €548,700 on capital investment in 2023, over double the average for the ten ports across Ireland (€203,700), and driven by commercial fishing.

Commercial fishing typically made the largest average investment of the three seafood sub-sectors (€978,000) more than four times greater than the average capital investment spend of the sub-sector (€229,100). The equivalent average investment by local fish processing (€367,400) and aquaculture (€133,600) businesses lagged behind the average ports equivalents (€1,974,300 and €144,400 respectively).

Fig. 6. Average capital investment by firm, Castletownbere, 2023



Source: *Oxford Economics, Perceptive Insight*

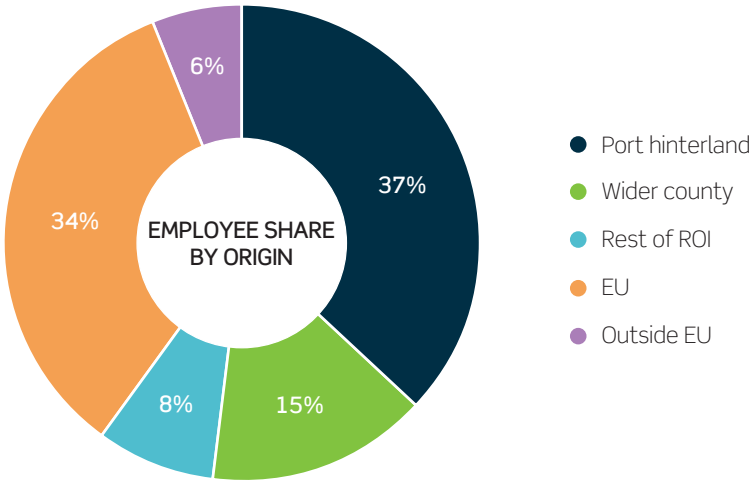
Alongside demonstrating the importance of the seafood sector in providing local job opportunities, the survey also sought to further understand the characteristics of this workforce — namely where the seafood sector's employees originate from. The results show that the largest group (37%) of workers in the seafood sector originate from the port hinterland, further highlighting the value of the seafood sector to the local population in Castletownbere. A further 15% of workers come from somewhere else in Co. Cork. Around two-fifths (40%) were foreign nationals, mostly originating from the EU (34%).

In the previous study, a majority (53%) of workers in the seafood sector originated from the port hinterland. A further 4% of workers originated from Co. Cork. Just over a third (38%) were foreign nationals, mostly originating from the EU (33%).

The profile of the workforce is broadly similar across each of the three seafood sub-sectors, with a similar share of workers originating from the port hinterland across aquaculture (42%), commercial fishing (38%) and fish processing (32%).

Even though a relatively low share of the workforce is from the hinterland originally, the bulk currently live locally. A significant majority of the workforce reside within the port hinterland (85%), while a further 8% live elsewhere in Co. Cork.

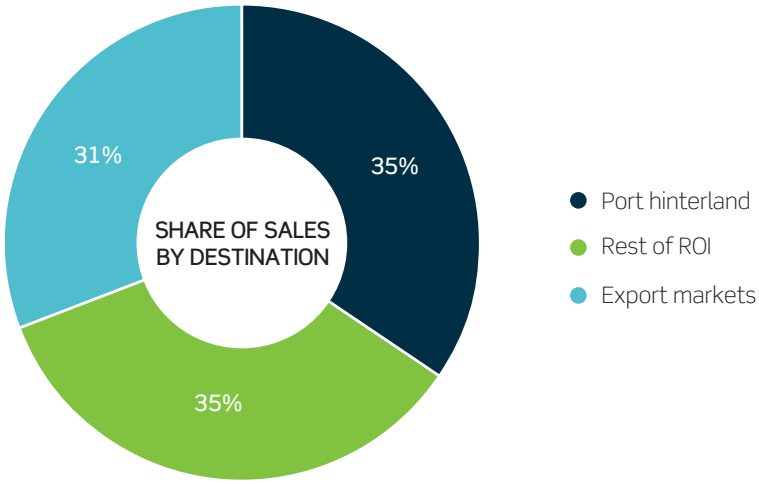
Fig. 7. Origins of the workforce, Castletownbere, 2023



Source: *Oxford Economics, Perceptive Insight*

The survey also explored the destinations of sales by seafood sector firms. Exports accounted for 31% of the total in Castletownbere, a share substantially below the ten ports combined average (56%). Although the sample size is relatively low, a significant majority of exports were to the EU. The remaining share of sales were distributed evenly between the port hinterland (35%) and the rest of Ireland (35%).

Fig. 8. Sales by destination, Castletownbere, 2023



Source: *Oxford Economics, Perceptive Insight*

2.2 Conclusion

An analysis of the survey findings demonstrates the importance of the seafood sector to the local economy. It provided direct employment for 835 people and a significant majority of the workforce resided within the port hinterland (85%), while a further 8% lived elsewhere in Co. Cork.

Nearly nine in every 10 seafood businesses had been operating for more than 10 years in the port area. These businesses had estimated turnover of €151.4 million with nearly one-third of sales coming from export markets.

Over two fifths (43%) of survey respondents expected a decrease in turnover over the following year, with a further one-third experiencing their turnover being mostly unchanged over the previous 12 months.

Finally, average capital investment levels within the sector were high relative to the some of the other main ports covered in the study — this was largely driven by the commercial fishing sub-sector which demonstrated an average spend figure significantly above the average for the ten main ports.

3. The impact of seafood's sub-sectors

This section looks at the wider economic footprint of Castletownbere's seafood sector on the regional economy.

3.1 Commercial fishing

The largest of Castletownbere's seafood sub-sectors, commercial fishing, generated €53 million of GVA across the South West economy in 2023. More than a third of this total (€23 million) was not directly generated by commercial fishing activity at the port but resulted from activity within its supply chain (€16.5 million) and the wider consumer spending impacts (€6.7 million).

The commercial fishing sub-sector is estimated to have sustained 720 jobs throughout the South West, supporting €22.1 million in gross wages in 2023. The indirect and induced effects tend to occur in relatively higher value-added sectors, generating more GVA per worker on average — and higher average gross wages — when compared to commercial fishing's 'direct' activity within the port area. The employment multiplier for the direct commercial fishing activity that takes place at Castletownbere is 1.40 which is slightly higher than the employment multiplier from the previous study of 1.35.

Table 4. Benefits of the commercial fishing sub-sector, South West, 2023

Port commercial fishing	South-West		
	GVA (€m)	Employment	Gross wages (€m)
Direct	29.9	515	13.0
Indirect	16.5	150	6.5
Induced	6.7	55	2.6
Total	**53.1**	**720**	**22.1**

Source: *Oxford Economics, Perceptive Insight, CSO*
Note: *May not sum due to rounding*

As expected, the agriculture, forestry and fishing sector accounted for close to two thirds of all GVA generated by Castletownbere's commercial fishing activities, equivalent to €32 million in 2023. It was also the main beneficiary in employment terms, supporting 565 jobs in 2023, or 78% of the total sustained within the region.

Outside of the agriculture, forestry and fishing sector, the wholesale and retail sector received the largest GVA benefit (€6.8 million) — linked largely to the indirect effects associated with commercial fishing procurement spend throughout the South West economy and the induced impacts of those employed directly and indirectly spending their income. The manufacturing sector received the next largest GVA benefit (€4.7 million), representing 9% of the GVA total.

Commercial fishing at the port had a GVA multiplier of 1.77 across the regional economy. This means that for every €1 of GVA that was directly generated by commercial fisheries at Castletownbere, a further €0.77 of GVA was supported throughout the regional economy. This was stronger than the respective GVA multiplier in aquaculture (1.69) but weaker than that of fish processing (4.79).

Table 5. Total benefits of commercial fishing by sector, South West, 2023

Port commercial fishing	South-West		
	GVA (€m)	Employment	Gross wages (€m)
Agriculture, forestry and fishing	32.0	565	13.8
Mining and quarrying	0.0	0	0.0
Manufacturing	4.7	5	1.4
Electricity, gas, steam and air conditioning supply	0.4	<5	0.1
Construction	0.0	<5	0.0
Wholesale and retail trade; repair of motor vehicles	6.8	75	3.3
Transportation and storage	1.1	15	0.5
Accommodation and food service activities	0.3	10	0.3
Information and communication	0.5	0	0.1
Financial and insurance activities	1.3	10	0.5
Real estate activities	2.7	<5	0.1
Other business services	1.8	10	0.6
Public administration and defence	0.0	0	0.0
Education	0.3	5	0.2
Human health and social work activities	1.2	20	1.0
Arts, entertainment and recreation & other services	0.2	5	0.1
Total	**53.1**	**720**	**22.1**

Source: *Oxford Economics, Perceptive Insight, CSO*
Note: *May not add due to rounding*

3.2 Aquaculture

Despite being the smallest of the seafood sub-sectors, in turnover terms, within Castletownbere, aquaculture supported an estimated €21.8 million of GVA within the South West economy in 2023. Alongside the 130 direct jobs within the port area, the sector supported a further 75 jobs elsewhere in the South West economy and generated €8 million in earnings. The employment multiplier for the direct aquaculture activity in Castletownbere is 1.56 which was 1.56, slightly higher than the employment multiplier, 1.49, from the 2018 study.

Table 6. Benefits of the aquaculture sub-sector, South West, 2023

Port aquaculture	South-West		
	GVA (€m)	Employment	Gross wages (€m)
Direct	12.9	130	4.6
Indirect	6.5	55	2.5
Induced	2.4	20	0.9
Total	**21.8**	**205**	**8.0**

Source: *Oxford Economics, Perceptive Insight, CSO*
Note: *May not sum due to rounding*

Aquaculture is similar to commercial fishing in that the agriculture, forestry and fishing sector accounts for a high share of the resulting economic benefits. Close to 75% of the employment total supported by local aquaculture belonged to the agriculture, forestry and fishing sector (150 jobs). This was followed by the wholesale and retail sector which represented 10% of the jobs total (20 jobs). Agriculture, forestry and fishing also accounted for high shares of the total gross wage impact — 61%, or €4.9 million — and GVA impact (€13.7 million or 63%).

Manufacturing received the next largest GVA contribution (€2.4 million) — linked largely to the induced effects of additional spending in the South West economy — while wholesale and retail received the next largest contribution with a €1.9 million GVA impact within the South West.

Table 7. Total benefits of aquaculture by sector, South West, 2023

Port aquaculture	South-West		
	GVA (€m)	Employment	Gross wages (€m)
Agriculture, forestry and fishing	13.7	150	4.9
Mining and quarrying	0.0	0	0.0
Manufacturing	2.4	<5	0.7
Electricity, gas, steam and air conditioning supply	0.1	<5	0.0
Construction	0.0	0	0.0
Wholesale and retail trade; repair of motor vehicles	1.9	20	0.9
Transportation and storage	0.6	10	0.3
Accommodation and food service activities	0.1	5	0.1
Information and communication	0.2	0	0.0
Financial and insurance activities	0.6	5	0.2
Real estate activities	0.8	0	0.0
Other business services	0.8	5	0.3
Public administration and defence	0.0	0	0.0
Education	0.1	<5	0.1
Human health and social work activities	0.4	10	0.4
Arts, entertainment and recreation & other services	0.1	<5	0.0
Total	**21.8**	**205**	**8.0**

Source: *Oxford Economics, Perceptive Insight, CSO*
Note: *May not add due to rounding*

3.3 Fish processing

Castletownbere's fish processing sub-sector is estimated to have supported 685 jobs, €17.8 million in gross wages, and contributed €43 million in GVA to the South West economy in 2023. An estimated 495 of these jobs resulted from fish processing's supply chain and consumer spending impacts throughout the region. The analysis shows that fish processing recorded the strongest employment multiplier (3.60) of the three local seafood sub-sectors. Therefore, for every one direct fish processing job within the port, 2.60 additional jobs were supported within the rest of the South West. This is higher than the employment multiplier for fish processing (2.56) from the previous study. This change is due to the larger indirect impacts brought on by increased costs for seafood operators which resulted in higher supply chain spending.

Table 8. Benefits of the fish processing sub-sector, South West, 2023

Fish processing	South-West		
	GVA (€m)	Employment	Gross wages (€m)
Direct	9.0	190	5.0
Indirect	28.7	450	10.8
Induced	5.4	45	2.1
Total	**43.0**	**685**	**17.8**

Source: *Oxford Economics, Perceptive Insight, CSO*
Note: *May not sum due to rounding*

The South West's agriculture, forestry and fishing sector enjoyed the largest share of the GVA benefits associated with fish processing activity at Castletownbere, given it was the main supplier to the sub-sector. In 2023, the sector accounted for €14.8 million of GVA, equivalent to 34% of the total, alongside over half of total employment (365 jobs). An estimated €5.4 million was paid to those employed in the sector, the equivalent of 30% of total earnings.

Even though agriculture, forestry and fishing supported the highest number of jobs, manufacturing had a similar share of GVA, accounting for €14.4 million and supporting 195 jobs. This is explained by the relatively low wages of those working in the agriculture, forestry and fishing sector – €14,800 – compared to the €34,000 paid to those in manufacturing. As most of the manufacturing employment is directly associated with the fish processing activity, these differences are driven directly from the seafood survey.

Outside of manufacturing and agriculture, forestry and fishing (which enjoyed a significant share of the sub-sector's procurement spend), the wholesale and retail sector was the next largest benefactor in the South West. Fish processing supported approximately 40 jobs within the sector, alongside €1.9 million in earnings and €3.9 million in GVA.

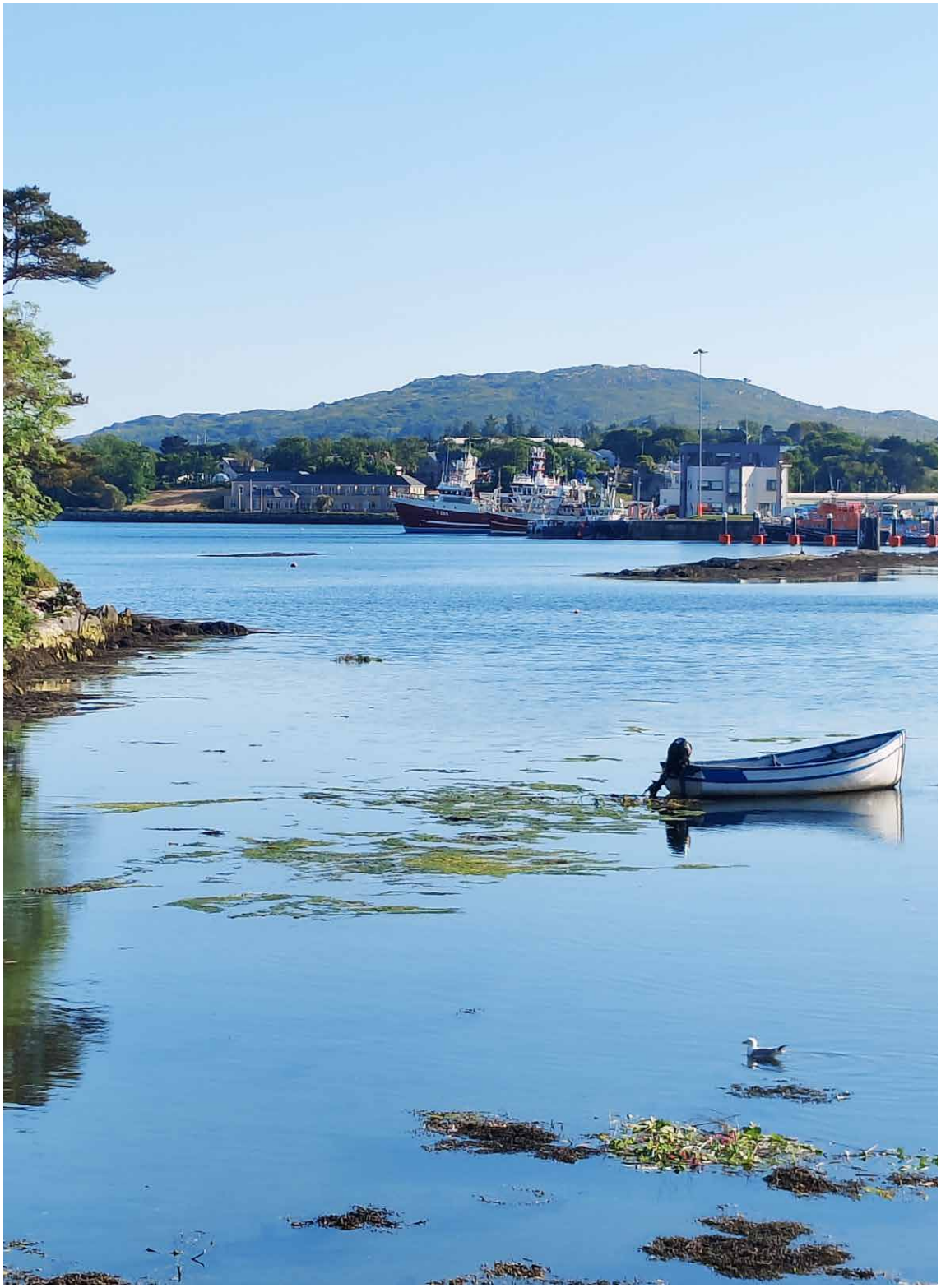
Table 9. Total benefits of fish processing by sector, South West, 2023

Ports processing	South-West		
	GVA (€m)	Employment	Gross wages (€m)
Agriculture, forestry and fishing	14.8	365	5.4
Mining and quarrying	0.0	0	0.0
Manufacturing	14.4	195	6.6
Electricity, gas, steam and air conditioning supply	0.7	5	0.2
Construction	0.0	<5	0.0
Wholesale and retail trade; repair of motor vehicles	3.9	40	1.9
Transportation and storage	1.2	15	0.6
Accommodation and food service activities	0.4	10	0.3
Information and communication	0.5	0	0.1
Financial and insurance activities	1.5	10	0.7
Real estate activities	1.9	<5	0.1
Other business services	2.0	10	0.7
Public administration and defence	0.0	0	0.0
Education	0.2	5	0.2
Human health and social work activities	1.0	20	0.9
Arts, entertainment and recreation & other services	0.3	5	0.1
Total	**43.0**	**685**	**17.8**

Source: *Oxford Economics, Perceptive Insight, CSO*
Note: *May not sum due to rounding*

3.4 Conclusion

All three of the port seafood sub-sectors represent significant value to the regional economy. In employment terms, they individually supported more than 205 jobs in the South West after accounting for their direct, indirect and induced impacts. Commercial fishing was the largest of the three in GVA terms. Its value added was more than that of aquaculture and fish processing and it supported an estimated €53.1 million of GVA throughout the wider region.



4. Total impact of the overall port seafood sector

4.1 Seafood sector activity at the port

This section takes the estimates presented in the preceding sections of the report and calculates the total economic impact resulting from the activities of the seafood sector within the port area.

Simply summing the respective benefits of all three elements (commercial fishing, aquaculture and fish processing) would inevitably overestimate the indirect, induced and as a result, total impacts. This is because the supply chains of the fish processing element contain a proportion of the commercial fishing/aquaculture sub-sectors and their supply chains. Therefore, adding everything together would double count some of the impacts. See Appendix 2 for further detail on the approach taken.

To avoid this double counting, the following approach has been taken to calculate total impacts for GVA, employment, gross wages and tax:

Direct impacts

- Calculated by summing the direct impacts from the three elements of the seafood sector for GVA, employment, gross wages and tax.

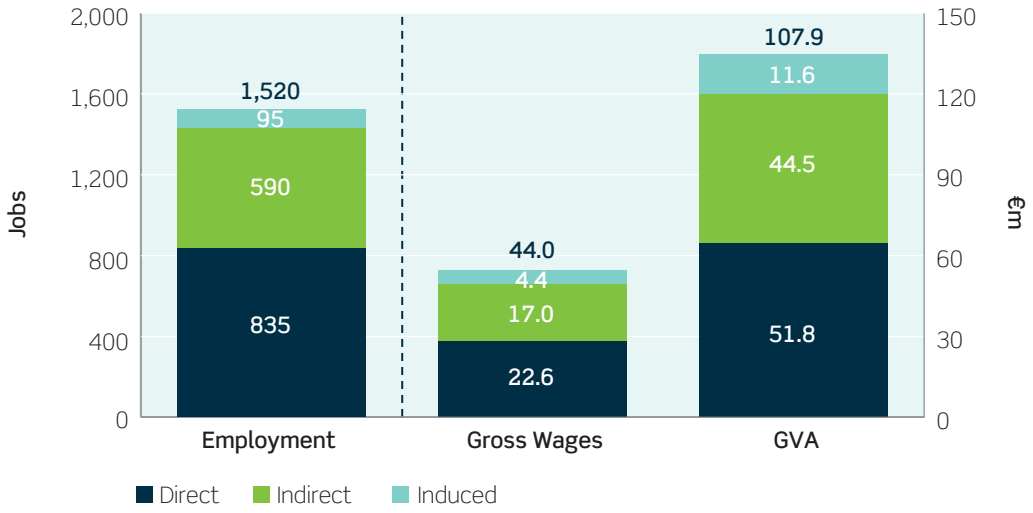
Indirect and induced impacts

- For GVA, employment, gross wages and taxes, the total indirect and induced impacts are calculated by summing the indirect and induced impacts of fish processing and a 94% and 59% share of the indirect and induced impacts from the respective aquaculture and commercial fishing sub-sectors (as information from the survey interviewees suggests that exports and domestic sales outside the port area's own processors accounted for 94% and 59% of the respective aquaculture and fishing production). The remainder of the commercial fishing/aquaculture sub-sectors' indirect and induced impacts will already have been accounted for in the indirect and induced impacts from the fish processing sub-sector.

4.2 Regional estimates

It is estimated that the seafood sector at Castletownbere contributed €107.9 million of GVA to the South West economy in 2023. The seafood sector supported 1,520 jobs across the region and generated €44 million in earnings (see Fig. 9).

Fig. 9. Benefits of the seafood sector, South West, 2023



Source: *Oxford Economics, Perceptive Insight, CSO*

Just over half of the total regional GVA benefit was generated either indirectly via seafood's wider supply chain (€44.5 million) or through the induced spending that came about as those employed within the sector and within its supply chain spent their earnings (€11.6 million). With an employment multiplier of 1.82, every direct seafood-related job within Castletownbere is estimated to have supported nearly one additional job within the rest of the regional economy. In the previous study, the employment multiplier for the seafood sector was 1.52.

Table 10. Total seafood sector benefits, South West, 2023

Ports seafood sector	South-West		
	GVA (€m)	Employment	Gross wages (€m)
Direct	51.8	835	22.6
Indirect	44.5	590	17.0
Induced	11.6	95	4.4
Total	**107.9**	**1,520**	**44.0**

Source: *Oxford Economics, Perceptive Insight, CSO*
Note: *May not sum due to rounding*

Given the predominance of commercial fishing at the port, the South West's agriculture, forestry and fishing sector benefits most from Castletownbere's seafood sector. This sector alone accounted for for €59.6 million of the GVA impact associated with seafood at the port across the South West region, equivalent to almost three-fifths of the total. This sector also accounts for a dominant share of the employment benefits — representing 1,055 jobs or 69% of the total. The South West's agriculture, forestry and fishing sector is estimated to have generated €23.7 million in gross wages as a result, accounting for a similarly high share of the total (54%).

Manufacturing receives the next largest contribution from Castletownbere's seafood sector, largely due to its fish processing sub-sector. This sector accounted for €19.5 million of local seafood's GVA impact across the South West economy in 2023, representing almost a fifth of the total. This sector however accounted for just 13% of employment (200 jobs) and 18% of gross wages (€8.1 million) because of higher output per head and relatively lower gross wages.

The wholesale and retail sector was the next largest beneficiary in GVA terms (€9.6 million), supporting an estimated 105 jobs, followed by real estate activities (€4.3 million) and other business services (€3.9 million).

Table 11. Total benefits by sector, South West, 2023

Local seafood sector	South-West		
	GVA (€m)	Employment	Gross wages (€m)
Agriculture, forestry and fishing	59.6	1,055	23.7
Mining and quarrying	0.0	0	0.0
Manufacturing	19.5	200	8.1
Electricity, gas, steam and air conditioning supply	1.1	5	0.3
Construction	0.0	<5	0.0
Wholesale and retail trade; repair of motor vehicles	9.6	105	4.7
Transportation and storage	2.4	30	1.2
Accommodation and food service activities	0.7	20	0.5
Information and communication	0.9	<5	0.2
Financial and insurance activities	2.8	20	1.2
Real estate activities	4.3	5	0.1
Other business services	3.9	20	1.4
Public administration and defence	0.0	0	0.0
Education	0.5	10	0.4
Human health and social work activities	2.1	40	1.8
Arts, entertainment and recreation & other services	0.5	10	0.2
Total	**107.9**	**1,520**	**44.0**

Source: *Oxford Economics, Perceptive Insight, CSO*
Note: *May not sum due to rounding*

4.3 Taxation estimates

Seafood activity at the port provides further benefits through the generation of tax revenues to the Revenue Commissioners. These fiscal impacts can again be split into their direct, indirect and induced components depending on the channel of activity that gives rise to them. It is estimated that the port seafood sector had a direct net fiscal surplus of €8.1 million in 2023, consisting of the labour-based tax paid by the sector's employees (income tax, PRSI etc.), corporation tax receipts and sectoral taxation on production less subsidies.

The indirect fiscal benefits represent the same taxation components as above but are generated within the sector's wider supply chain, in addition to net taxes on input purchases. Combined these represented a net fiscal deficit of €4.6 million. As those employed in the sector and within its supply chain spend their gross wages, this supports further jobs and activity within the Irish economy. This induced activity supported an estimated additional €7.3 million in tax revenue.

Therefore, in total (i.e. direct, indirect and induced), the Castletownbere seafood sector is estimated to have had a fiscal deficit of €10.8 million in 2023. This total was made up of €13.9 million in employment/labour-related tax, €3.7 million in corporation tax, €4.1 million in taxation associated with the spending of gross wages, and a net tax deficit of €10.9 million through taxation on inputs and production.[3]

In comparison, the Castletownbere seafood sector generated an estimated €7.6 million in taxes in 2018. This was made up of €12.3 million in employment/labour-related tax, €3.0 million in corporation tax, €5.3 million in taxation associated with the spending of wages, and a net tax deficit of €12.9 million through taxation on inputs and production.[4]

3 Net tax position refers to taxes less subsidies.
4 Tax figures related to the 2018 study are in 2023 prices.

Table 12. Fiscal impacts by taxation type, Ireland, 2023

Ports seafood sector	Total tax estimates (€m)				
	Labour tax	Corporation tax	Production tax	Input purchases tax	Tax on consumption
Agriculture, forestry and fishing	6.3	1.9	-13.7	1.2	0.0
Mining and quarrying	0.0	0.0	0.0	0.0	0.0
Manufacturing	3.1	0.7	0.1	0.3	3.5
Electricity, gas, steam and air conditioning supply	0.1	0.0	0.2	0.0	0.0
Construction	0.0	0.0	0.0	0.0	0.1
Wholesale and retail trade; repair of motor vehicles	1.3	0.3	0.1	0.0	0.0
Transportation and storage	0.5	0.1	0.1	0.1	0.0
Accommodation and food service activities	0.2	0.0	0.0	0.1	0.4
Information and communication	0.2	0.0	0.0	0.0	0.2
Financial and insurance activities	0.6	0.1	0.1	0.0	0.0
Real estate activities	0.1	0.2	0.3	0.0	0.1
Other business services	0.5	0.1	0.0	0.0	0.1
Public administration and defence	0.0	0.0	0.0	0.0	0.0
Education	0.2	0.0	0.0	0.0	-0.2
Human health and social work activities	0.7	0.1	0.0	0.0	-0.1
Arts, entertainment and recreation & other services	0.1	0.0	0.0	0.0	0.0
Total	**13.9**	**3.7**	**-12.8**	**1.9**	**4.1**

Source: *Oxford Economics, Perceptive Insight, CSO*

4.4 Growth since 2018

Over the period 2018 to 2023, in real terms, Castletownbere had mixed results across all channels in GVA, employment and gross wages. In the direct channel, GVA, employment and gross wages fell by 27.8%, 12.1% and 8.1%, respectively. In the indirect channel, GVA, employment and gross wages increased by 42.3%, 59.5% and 21.4%, respectively. In the induced channel, GVA, employment and gross wages also fell by 1.9%, 24% and 20.1%.

Overall, Castletownbere experienced a real terms decline in GVA and gross wages of an estimated 6.1% and 0.2%, respectively. This was accompanied by a growth in employment of 4.8%. The fall in GVA and gross wages can be attributed to a range of factors such as the salmon farming being reallocated to a number of different ports instead of solely Castletownbere as was the case in the previous study. Furthermore, turnover estimates provided by BIM are considerably lower than they were in the last study for several large seafood operators. However, these falls have been offset by strong impacts in the indirect channel, signalling increased supply chain spending due to increased costs across seafood businesses, particularly in the fish processing sub-sector.

4.5 Conclusion

This analysis shows that the seafood sector at Castletownbere supported 1,520 jobs, €44 million in gross wages and €107.9 million in GVA across the South West. Furthermore, this activity is estimated to have created a fiscal surplus of €10.8 million.

5. Conclusions

5.1 The seafood sector in Castletownbere

The seafood sector makes an important contribution to the Castletownbere economy. In 2023, direct seafood sector at the port generated €151.4 million in turnover, supporting 835 direct jobs. In turnover terms, fish processing was the largest seafood sub-sector at the port, generating €67.3 million in turnover, followed by commercial fishing (€59.3 million) and aquaculture (€24.9 million). When translated into GVA, the overall seafood sector made a €51.8 million direct contribution to the local port economy.

The survey explored the characteristics of firms operating in this sector. In general, firms were typically well-established, having operated for more than 10 years. Seafood business operating in Castletownbere typically invested less in capital relative to some of the other main port across Ireland, although fish processing somewhat bucked the trend. The majority of the workforce tended to originate from the county, and the end-market for local seafood sales tended to be locally focused, with 70% of sales occurring within Ireland. In terms of performance, the majority of turnover tended to be either down or relatively stable year-on-year.

5.2 The commercial fishing sub-sector is the main contributor

The commercial fishing sub-sector made the strongest contribution to the South West economy. In 2023, it generated €53.1 million of GVA, of which €23.2 million was linked to indirect (€16.5 million) and induced (€6.7 million) effects. The commercial fishing sector had the lowest employment multiplier of the three seafood sub-sectors, with every direct job supporting an additional one third of a job within the rest of the South West region. The commercial fishing sub-sector is estimated to have provided benefits of the following size:

- 515 direct jobs and €13.0 million of gross wages, producing €29.9 million of GVA;
- 150 indirect jobs and €6.5 million of gross wages, producing €16.5 million of GVA;
- 55 induced jobs and €2.6 million of gross wages, producing €6.7 million of GVA.

5.3 Remaining components have significant impact

Although the fish processing sub-sector's economic footprint was smaller than that of the local commercial fishing sector, its employment multiplier was the strongest of the three seafood sub-sectors. Accordingly, the analysis shows the economic impact of the fish processing element was of the following size in 2023:

- 190 direct jobs and €5.0 million of gross wages, producing €9.0 million of GVA;
- 450 indirect jobs and €10.8 million of gross wages, producing €28.7 million of GVA;
- 45 induced jobs and €1.4 million of gross wages, producing €5.4 million of GVA.

Fish Processing	GVA	Employment	Wages
	Direct -51% since 2018	**Direct** 0% since 2018	**Direct** +16% since 2018
	Total +5% since 2018	**Total** +41% since 2018	**Total** +16% since 2018

Furthermore, the analysis shows that the economic impact of the port's aquaculture sector equated to the following benefits across the South West economy:

- 130 direct jobs and €4.6 million of gross wages, producing €12.9 million of GVA;
- 55 indirect jobs and €2.5 million of gross wages, producing €6.5 million of GVA;
- 20 induced jobs and €0.9 million of gross wages, producing €2.4 million of GVA.

Aquaculture	GVA	Employment	Wages
	Direct -24% since 2018	**Direct** -35% since 2018	**Direct** -26% since 2018
	Total -16% since 2018	**Total** -31% since 2018	**Total** -22% since 2018

Therefore, it is estimated that the port's collective seafood sector supported 1,520 jobs, €44 million in gross wages and €107.9 million in GVA within the regional economy in 2023. In comparison, once the results from the 2018 study are converted to 2023 prices, there was a decline in GVA and gross wages of 6.1% and 0.2%, while employment was up 4.8%. The fall in GVA and gross wages can be attributed to a range of factors such as the salmon farming being reallocated to a number of different ports instead of solely Castletownbere as was the case in the previous study. Furthermore, turnover estimates provided by BIM were considerably lower than they were in the last study for several large seafood operators. However, these falls have been offset by strong impacts in the indirect channel, signalling increased supply chain spending due to increased costs across seafood businesses, particularly in the fish processing sub-sector.

Overall Seafood Sector	GVA	Employment	Wages
	Direct -28% since 2018	**Direct** -12% since 2018	**Direct** -8% since 2018
	Total -6% since 2018	**Total** +5% since 2018	**Total** -0.2% since 2018

5.4 Seafood supporting peripheral economies

The local economy faces significant challenges. Generally, it has an older population and hence a below-average share of working-age residents. The working-age share has been declining, meaning it will be increasingly difficult for growing firms to source labour. Linked to this the qualification attainment profile of the local population is relatively more aligned with employment opportunities presented within the agriculture, forestry and fishing sector.

The seafood sector is likely to continue to play a significant role in the local port economy through its provision of direct jobs, supply chain spending in local businesses and the consumer spending it supports. Looking forward, a vibrant and growing local seafood sector is likely to be important for the economic and demographic health of the local area.

Appendix 1: Castletownbere's economic challenges

Economic activity and structure

The latest available data indicates that Castletownbere's headline unemployment rate is relatively low. The unemployment rate stood at 7.3% in 2022, the same rate seen in the South-West region (7.3%) and somewhat lower than the national rate (8.3%).[5]

However, the employment rate of 51% was also below that of both the regional and national averages (see Table 13). Census data for 2022 therefore reveals that the economic inactivity rate[6] among those residents aged 15 and over was 45%. Local inactivity was therefore higher than that experienced across both the South-West (40.1%) and Ireland as a whole (38.8%) in 2022.

Table 13. Headline economic indicator comparisons, 2022

	Unemployment rate	Employment rate	Economic inactivity
Castletownbere	7.3%	51.0%	45.0%
South-West	7.3%	55.5%	40.1%
Ireland	**8.3%**	**56.1%**	**38.8%**

Source: *CSO*

Demographics

The port area and hinterland's population grew by 7.9% in the six years between 2016 and 2022, faster than the average for the South-West (6.6%), but slower than that for Ireland (8.1%). The working-age population — those aged 15 to 64 — represented a relatively low 59% of the Castletownbere population, compared to 64.4% and 65.3% across the South-West and Ireland, respectively. This relatively small share is compounded by the lower growth of the working-age population of around 4.8% over this period which compares to regional growth of 5.2% and national growth of 7.8%.

Table 14. Population indicators, 2022

	Growth (2016-2022)		2022	
	Population	Working age	Population	Working age share
Castletownbere	7.9%	4.8%	14,100	59.0%
South-West	6.6%	5.2%	728,100	64.4%
Ireland	**8.1%**	**7.8%**	**5,149,100**	**65.3%**

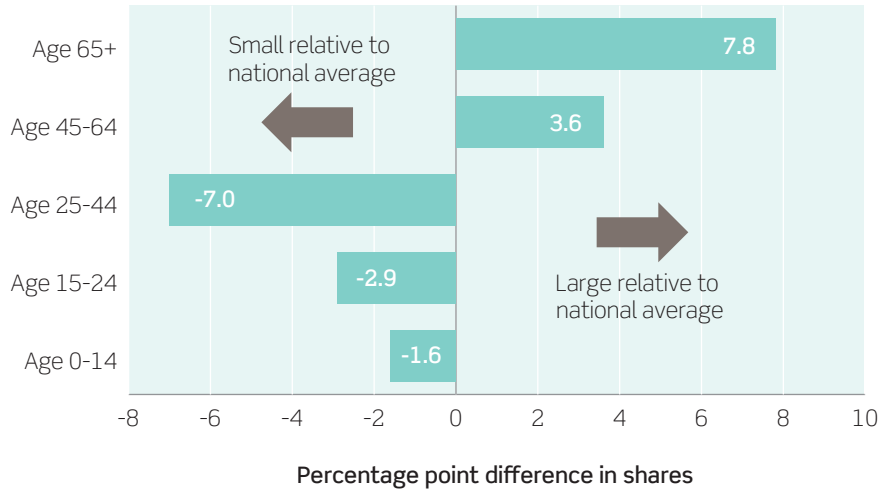
Source: *CSO*
Note: *Working age is defined as those aged between 15 and 64*

5 Defined as a share of the labour force aged 15 years and over.

6 Economic inactivity represents the share of the population aged 15 and over who were neither employed nor looking for employment.

An analysis of port area's population by age cohorts relative to the national picture shows that the distribution is skewed towards the middle-aged and older age groupings. Those aged 65 and over accounted for more than 23% of the population in 2022 — well above the national average (15%). At the same time, younger working-age people (aged 25-44) were under-represented within the local population, relative to the national average.

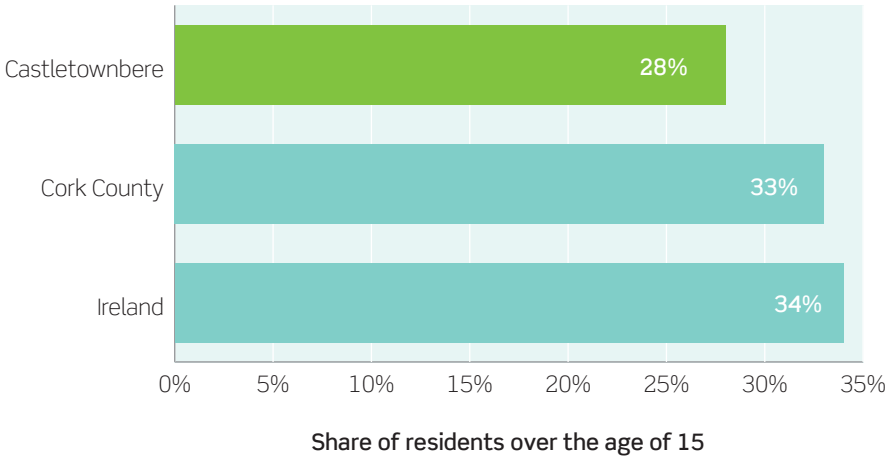
Fig. 10. Age group comparisons, Port area vs Ireland, 2022



Source: *CSO Ireland*

Qualification attainment within the port area is below what is observed at both the county and national levels. Those with no formal qualifications or, at most, primary level education represented 11% of residents aged 15 and over in 2022, above the county and national averages of 9% and 10%, respectively. Equally, higher-level attainment among the port hinterland's residents was much weaker than the national average. Those educated to degree level or above accounted for 28% of those aged 15 and over in Castletownbere — a rate somewhat lower than both Cork County (33%) and Ireland (34%). Given that higher-level qualifications tend not to be required for most occupations in the local agriculture, forestry and fishing and food processing sectors, this further highlights the importance of the seafood sector in supporting job opportunities for local workers.

Fig. 11. Degree level or above attainment, 2022



Source: *CSO*

Summary

The local economy faces significant challenges. Generally, it has an older population and hence a below-average share of working-age residents. The working-age population is growing more slowly than the regional and national rates, meaning it will be increasingly difficult for growing firms to source labour. On the other hand, the qualification attainment profile of the local population is relatively more aligned with employment opportunities presented within the agriculture, forestry and fishing sector.

As a result, the seafood sector is likely to continue to play a significant role in the local port economy through its provision of direct jobs, supply chain spending in local businesses, and the consumer spending it supports. Looking forward, a vibrant and growing local seafood sector is likely to be important for the economic and demographic health of the local area.

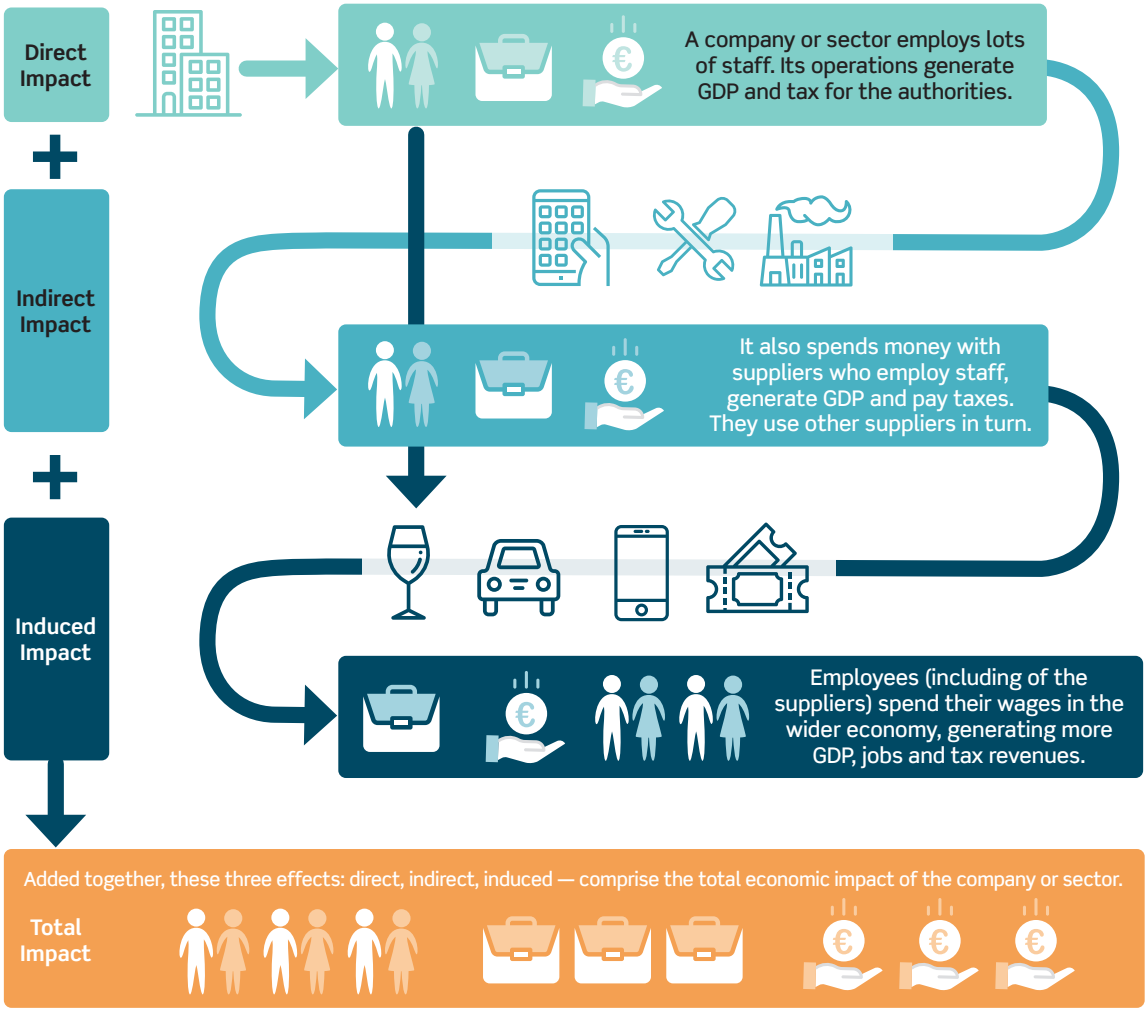
In comparison to the last study, the unemployment rate fell from 9.9% in 2016 to 7.3% in 2022 while the employment rate grew from 50.0% in 2016 to 51.0% in 2022. The working-age share fell from 60.8% in 2016 to 59.0% in 2022. The age group comparisons with the national average are largely the same as what they were in 2016 with each grouping still being smaller or larger than the national average as they were in the previous study. Castletownbere improved its educational attainment with the proportion of people holding a degree level or higher qualification growing from 22% in 2016 to 28% in 2022.

Appendix 2: Model approach

Understanding economic impact assessments

An economic impact assessment quantifies the total economic benefit created by a sector through a range of different channels. For the seafood sector at the ports this arises in four main ways. The first three are the standard channels through which economic impact is usually quantified: direct operational effects, supply chain effects, and the impact of employees spending their wages in the wider consumer economy. The fourth channel, known as 'catalytic' or 'dynamic' benefits represent the wider benefits that society and/or other industries derive from the original economic activity.

Fig. 12. Overview of economic impact methodology



This report uses three main metrics to quantify each of the channels by which the seafood sector could contribute to the regional[7] and national economy:

- **Gross value-added (GVA)** contribution to Gross Domestic Product (GDP)[8]: This measures the value of goods and services produced in an area, industry or sector of an economy and is equal to output minus intermediate consumption;
- **Employment**: Employment is presented in terms of full-time equivalent (FTE) jobs as defined in the report, the combination of workplace employment by full time and part time status;
- **Gross wages** is the total value of salary, bonus and benefits offered to the workers associated with the local seafood sector alongside.

All the data used was either provided by BIM (for example recent seafood operator registrations/industry data), the seafood sector survey which was carried out by Perceptive Insight, or published government website data and industry standards from the likes of CSO Ireland and Oxford's own economic databases. In the absence of data, reasonable assumptions based on best judgement are clearly rationalised in the study. For example, in the absence of port-specific data, published sources for comparator geographies were used as proxy estimates where appropriate.

Estimating the direct economic contribution

The first step was to understand the direct activity associated with the local seafood sector at each of the 10 ports in 2023.

The survey

The Seafood Survey was designed to provide the evidence base from which to estimate the local seafood sector's contribution to the regional/national economy. Responses from the sector were analysed according to common characteristics (sub-sector, turnover band, main port area etc.) and cross-referenced with the most recent full snapshot of the local seafood sector population.[9]

Sample estimates were then 'grossed' up to that of the total population. This was done by drawing on the BIM database of the seafood sector population in each port which contained fields on sector and turnover bands. Knowing indicative turnover levels for seafood businesses not captured in the survey, researchers were able to apply the average ratio of jobs to turnover level in that sector and apply average sectoral gross wages, etc. In other words, researchers utilised knowledge of the sectors and turnover of the missing companies and applied the ratios and averages of those covered in the survey to estimate their activity. The resulting total seafood-related turnover estimate is then split into the different sectors of the economy ('Agri, forestry and fishing' and 'Manufacture of food products').

This turnover figure is essentially the value of output within the local seafood sector and encompasses intermediary demand, gross wages and profits. Using the sectoral ratios of output to GVA in the Irish input-output tables researchers estimated the direct sectoral GVA contributions to GDP in the local economy. Both direct employment and gross wages paid within the local port seafood sector are again informed by the survey findings and grossed to the population total based on shared characteristics.

With this estimate of direct output and gross wages, sectoral taxation assumptions were applied and the resulting fiscal benefits that would likely be collected by the Revenue Commissioners were calculated.

7 Ideally, the impacts of the seafood sector on the port area would be quantified, but there was not enough published sectoral employment, GDP and wage data. Sufficient data was only available at regional level to produce sub-national impacts.

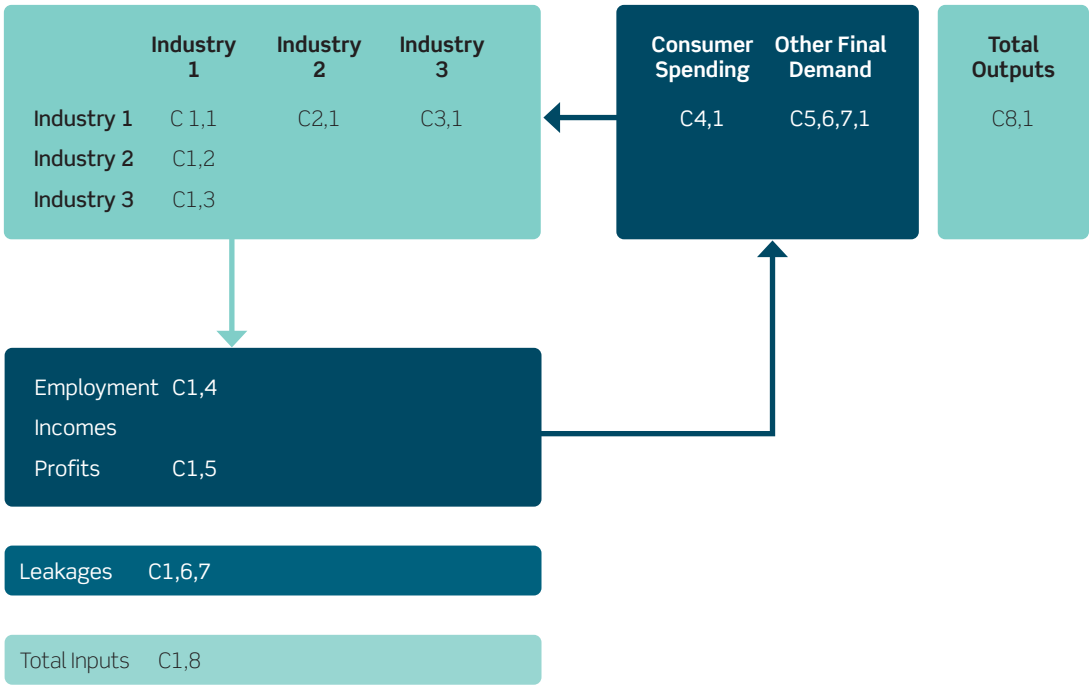
8 GDP is the main summary indicator of economic activity in Ireland. GDP can be defined as GVA plus taxes on products less subsidies on products. References to economic growth (or when the economy enters recession) typically relate to the rate of change of GDP. All references in this report relate to GVA; also known as GDP at 'basic prices'; and they exclude taxes and subsidies.

9 Provided by BIM and informed by the most recent fishery registrations and activity listings in the aquaculture and processing sectors. Turnover bands were also assigned to the local seafood population based on returns when available, and when not, estimated by BIM based on shared characteristics.

Estimating indirect and induced impacts

An input-output model was used to estimate the indirect and induced impacts. Fig. 11 presents a stylised version (showing just three sectors for presentation purposes) of the Input-Output model which is a model that traces how economic activity flows through an economy as one sector makes purchases from another sector.

Fig. 13. Stylised input-output model



The latest Irish input-output tables were used for the analysis, but were adjusted in line with academic guidelines (Flegg, A. T. and Tohmo, T. (2013) "Regional input-output tables and the FLQ formula: A case study of Finland") to account for the size and structure of the local economy.[10] The technique involves constructing sub-national input-output models by applying Location Quotients (LQs) and sub-national size adjustments to the standard Ireland Input-Output tables. The result is that geographies with higher concentrations of industries receiving procurement or household expenditure have larger impacts. In addition, information gathered from the was used to further isolate the procurement spend locally, thereby strengthening the overall modelling assumptions.

MODELLING SUPPLY CHAIN IMPACTS

The survey yielded information on the size of supply chain spending relative to turnover, its allocation to specific parts of the economy/goods/services and its location (local/national/international). This information was used to construct to construct a more detailed picture of the first round of supply chain spending than the published input-output tables would otherwise provide.

10 Due to data availability, the local seafood sector's economic impact can only be localised to the regional level (NUTS 3).

The impact model was then used to estimate all the **rounds of supply chain or indirect spending** of the local seafood sector. The input-output tables provided an estimate of indirect output by sector. This output was then converted back into sectoral GVA and into sectoral jobs to provide a range of sectoral impact measurements. The application of average sectoral salaries allowed for the estimation of the income effect.

The induced impact is economic activity and employment supported by those directly or indirectly employed spending their income on goods and services in the wider economy. This helps to support jobs in the industries that supply these purchases, and typically includes jobs in retail and leisure outlets, companies producing consumer goods and in a range of service industries. Again, the Input-Output model was used to estimate the induced impacts.

Overcoming double-counting

Throughout the analysis the impact estimates are presented for the core elements of the seafood sector — commercial fishing, aquaculture and fish processing. However, when estimating the total impact of the overall ports seafood sector, simply summing the respective benefits of all three sub-sectors would inevitably over-estimate the indirect and induced and as a result, total impacts. This is because the supply chains of the processing element contain a proportion of the fishing/aquaculture sub-sectors and their supply chains. Therefore, adding everything together would result in the double counting some of the impacts.

To avoid this, the following approach was taken to calculate total impacts for GVA, employment, gross wages and tax:

Direct impacts:

- Calculated by summing the direct impacts from the three elements of the seafood sector for GVA, employment and gross wages.

Indirect impacts:

- For GVA, employment and gross wages, total indirect impacts are calculated by summing the indirect impacts of processing and a share of the indirect impacts from the fishing and aquaculture sub-sectors (as indicated by survey responses showing the extent to which local processors account for their total sales). The remainder of the fishing/aquaculture sub-sectors' indirect impacts will already be accounted for in the indirect impacts from the processing sub-sector.

Induced impacts:

- For GVA, employment and gross wages, total induced impacts are calculated by summing the induced impacts of the local processing sector and a share of the induced impacts from the commercial fishing and aquaculture sub-sectors (as indicated by survey responses showing the extent to which local processors account for their total sales). The remainder of the fishing and aquaculture sub-sectors' induced impacts will already be accounted for within the induced impacts from the fish processing sub-sector.

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