

# Export Value of Atlantic Universities

**Prepared for:**  
Association of Atlantic Universities (AAU)

**Prepared by:**  
Gardner Pinfold Consultants

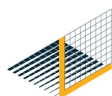
**September 2023**



## ABOUT THIS REPORT

This report for the Association of Atlantic Universities examines the export value of universities in Atlantic Canada's four provinces for the academic year 2022/23. Universities export education services to students from outside their province, and universities also export research services that are funded from outside the region. The scale of these exports is compared to other economic sectors in the region that are recognized as leading exporters of goods and services.

**Gardner Pinfold**  
Consultants



[www.gardnerpinfold.ca](http://www.gardnerpinfold.ca)  
(902) 297-6000

**How to cite this report:** Gardner Pinfold Consultants, 2023. Export Value of Atlantic Universities (For the Association of Atlantic Universities).



## **TABLE OF CONTENTS**

|   |            |
|---|------------|
| <b>INTRODUCTION</b> -----                 | <b>2</b> - |
| <b>ENROLMENT</b> -----                    | <b>2</b> - |
| <b>STUDENT AND VISITOR SPENDING</b> ----- | <b>2</b> - |
| <b>FEDERAL RESEARCH GRANTS</b> -----      | <b>3</b> - |
| <b>ECONOMIC IMPACTS</b> -----             | <b>4</b> - |
| <b>APPENDIX – PROVINCIAL TABLES</b> ----- | <b>5</b> - |

## Introduction

Atlantic Canada's universities continue to grow the economy with revenues from outside the region by exporting education and research services. Exports include both goods and services provided to students and research organizations outside the province.<sup>1</sup> This report positions Atlantic universities as a leading export group that competes for students and research funding in regional, national and international 'markets'.

In order to quantify the export values for the 2022/23 academic year, this report combines data from the Maritime Provinces Higher Education Commission (MPHEC), the Association of Atlantic Universities (AAU) and its member universities, the Council of Atlantic Ministers of Education and Training (CAMET), and national research funding organizations.

## Enrolment

Determining the exports of universities begins with the enrolment of students from outside the province (Table 1). The latest out-of-province enrolments include other Atlantic Canadians (6,145), other Canadians (17,263), and international students (23,898). The AAU reported 93,136 total enrolments including students attending university in their home province, so the 47,306 out-of-province total means 51% of all students contribute to university exports.

**Table 1: Atlantic Canada universities enrolment by origin, 2021/22**

|               | Other Atlantic <sup>1</sup> | Other Canada  | International | Total         |
|---------------|-----------------------------|---------------|---------------|---------------|
| Full-time     |                             |               |               |               |
| Graduate      | 798                         | 2,333         | 5,060         | 8,191         |
| Undergraduate | 4,323                       | 11,964        | 16,773        | 33,060        |
| Part-time     |                             |               |               |               |
| Graduate      | 585                         | 1,090         | 212           | 1,887         |
| Undergraduate | 439                         | 1,876         | 1,853         | 4,168         |
| <b>Total</b>  | <b>6,145</b>                | <b>17,263</b> | <b>23,898</b> | <b>47,306</b> |

Sources: AAU provided 2022/23 international enrolments; MPHEC provided 2021/22 other Atlantic and other Canada breakdown. Memorial University provided their data. Note 1: "Other Atlantic" indicates students studying in a different province from their province of residence in the Atlantic region.

## Student and visitor spending

The spending brought to the provinces by visiting students is determined as follows:

- **University fees, residence and meals** – are reported for 2022/23 by MPHEC for each university (except data obtained directly from Memorial University) including detail by: student origin (domestic and international), full-time and part-time status, and undergraduate and graduate levels of study. An average tuition across programs, and average residence and meal plan costs are estimated to account for the range of options.

<sup>1</sup> The general delimitation of exports is defined in Statistics Canada's system of national accounts. A region's exports include both goods and services rendered or offered by residents to non-residents, and does not necessarily imply that the good or service in question physically crosses the border.

- **Other living expenses** – are updated from a CAMET study<sup>2</sup> that collected 2,380 survey responses from international students across universities and colleges in Atlantic Canada. Students reported their spending on education fees and living costs and, for this report, the consumer price index has been applied to account for inflation. A current average estimate for domestic and international students is based on these figures.
- **Visitor spending** – friends and family often travel with students to university at the beginning of the year, they may attend events that students are involved in (e.g. athletic events and performances), or visit through the year including graduation at the end of their program. These visitor costs were examined in a previous AAU report and are updated here based on the consumer price index to account for inflation.

The total out-of-province student-related spending is \$2.1 billion, about 56% of which comes from international students. Undergraduate students contribute about 80% of the total spending.

**Table 2: Student spending by origin, 2022/23**

|                  | Other Atlantic       | Other Canada         | International          | Total                  |
|------------------|----------------------|----------------------|------------------------|------------------------|
| <b>Full-time</b> |                      |                      |                        |                        |
| Graduate         | \$32,069,667         | \$87,505,801         | \$221,135,650          | \$340,711,117          |
| Undergraduate    | \$173,902,208        | \$466,204,077        | \$863,385,363          | \$1,503,491,647        |
| <b>Part-time</b> |                      |                      |                        |                        |
| Graduate         | \$18,137,336         | \$36,504,804         | \$7,486,428            | \$62,128,568           |
| Undergraduate    | \$14,090,384         | \$58,148,781         | \$76,646,671           | \$148,885,835          |
| <b>Total</b>     | <b>\$238,199,594</b> | <b>\$648,363,462</b> | <b>\$1,168,654,111</b> | <b>\$2,055,217,167</b> |

Sources: MPHEC, CAMET, AAU.

## Federal research grants

Atlantic Canada’s universities attract over \$350 million in research funds from outside the province. Research funds, grants and contracts are primarily spent on wages and salaries of researchers living in Atlantic Canada and represent an important injection of incremental spending for the region. This does not fully account for all research exports since other public and private sector funding sources exist outside the region.

**Table 3: Canada Research Agency Grants, Fiscal Year 2021/2022**

| Province     | CIHR           | NSERC         | CFI           | CFREF         | SSHRC         | Total          |
|--------------|----------------|---------------|---------------|---------------|---------------|----------------|
| NS           | \$19.6         | \$46.6        | \$43.2        | \$22.0        | \$17.8        | \$149.2        |
| NB           | \$24.5         | \$10.3        | \$3.0         | \$0.0         | \$5.2         | \$43.0         |
| PEI          | \$13.0         | \$1.3         | \$0.0         | \$0.0         | \$0.8         | \$15.1         |
| NL           | \$112.5        | \$11.4        | \$0.4         | \$13.1        | \$5.9         | \$143.2        |
| <b>Total</b> | <b>\$169.6</b> | <b>\$69.5</b> | <b>\$46.6</b> | <b>\$35.1</b> | <b>\$29.7</b> | <b>\$350.5</b> |

Sources: Natural Sciences & Engineering Research Council of Canada, Social Sciences & Humanities Research Council, Canadian Institutes of Health Research, Canada Foundation for Innovation, Canada First Research Excellence Fund.

<sup>2</sup>Council of Atlantic Ministers on Education and Training (CAMET), 2018. The Economic Impact of International Students in Atlantic Canada. (online: [camet-camef.ca/english/home](http://camet-camef.ca/english/home))

## Economic impacts

The combined total spending of \$2.4 billion related to students and research flows “directly” to universities, local stores, and transport companies along with many other Atlantic Canada businesses. Table 4 (below) shows this supports economic output (spending) worth \$593 million for “indirect” businesses in the supply-chain across the provinces. When workers in the supply chain and direct businesses spend their wages and salaries, this “induces” another \$628 million in spending throughout Atlantic Canada. In total, about \$2.4 billion is added to the four provincial economies (gross domestic product – GDP), and this supports an estimated 32,400 full-time equivalent jobs. Over \$321 million in tax revenues are generated to the provincial governments and about \$247 million is generated to the federal government.

**Table 4: Economic impacts of Atlantic Canada universities exports**

| (\$000s)   | Direct      | Indirect  | Induced   | Province    | Canada      |
|------------|-------------|-----------|-----------|-------------|-------------|
| Output     | \$2,405,737 | \$592,831 | \$628,167 | \$3,626,734 | \$4,544,015 |
| GDP        | \$1,654,939 | \$328,456 | \$405,246 | \$2,388,641 | \$2,851,564 |
| Income     | \$1,017,788 | \$192,534 | \$163,222 | \$1,373,545 | \$1,631,174 |
| Jobs (FTE) | 24,624      | 3,968     | 3,791     | 32,383      | 36,762      |
| Prov taxes | \$188,048   | \$36,781  | \$95,964  | \$320,793   |             |
| Fed taxes  | \$167,789   | \$26,030  | \$51,120  | \$244,939   | \$247,454   |

Source: Statistics Canada interprovincial input-output economic model, 2019.

The combined \$2.405 billion of student and research export value can be compared to other well-recognized exporters in Atlantic Canada. Table 5 identifies universities amongst the top 10 exporting industries according to the 5-digit level North American Classifications (NAICS) reported by Industry Canada’s Trade Database Online. Atlantic universities are in the top five (5), just ahead of fishing.

**Table 5: Universities compared to other top 10 Atlantic Canada exporters, 2022**

| Rank | Industry                   | Exports \$000s |
|------|----------------------------|----------------|
| 1    | Petroleum refineries       | \$11,869,338   |
| 2    | Oil and gas extraction     | \$9,757,081    |
| 3    | Seafood manufacturing      | \$4,212,620    |
| 4    | Iron ore mining            | \$3,025,826    |
| 5    | Universities               | \$2,405,737    |
| 6    | Fishing                    | \$1,581,200    |
| 7    | Non-ferrous metal refining | \$1,207,297    |
| 8    | Sawmills and wood          | \$1,197,958    |
| 9    | Tire manufacturing         | \$1,192,625    |
| 10   | Frozen food manufacturing  | \$1,069,559    |

Source: Industry Canada On-Line Trade Database.

Note: Only international exports are shown for other exporters.



## APPENDIX – Provincial Tables

**Table A1: NS enrolment by origin, 2021/22**

|               | Other Atlantic | Other Canada  | International | Total         |
|---------------|----------------|---------------|---------------|---------------|
| Full-time     |                |               |               |               |
| Graduate      | 593            | 1,374         | 2,853         | 4,820         |
| Undergraduate | 2,909          | 7,416         | 9,012         | 19,337        |
| Part-time     |                |               |               |               |
| Graduate      | 394            | 716           | 175           | 1,285         |
| Undergraduate | 275            | 1,136         | 1,505         | 2,916         |
| <b>Total</b>  | <b>4,171</b>   | <b>10,642</b> | <b>13,545</b> | <b>28,358</b> |

Sources: AAU provided 2022/23 international enrolments; MPHEC provided 2021/22 other Atlantic and other Canada breakdown. Memorial University provided their data.

**Table A2: NS student spending by origin, 2022/23**

|               | Other Atlantic       | Other Canada         | International        | Total                 |
|---------------|----------------------|----------------------|----------------------|-----------------------|
| Full-time     |                      |                      |                      |                       |
| Graduate      | \$25,341,643         | \$57,763,509         | \$148,063,941        | \$231,169,092         |
| Undergraduate | \$124,183,513        | \$316,976,640        | \$510,044,934        | \$951,205,087         |
| Part-time     |                      |                      |                      |                       |
| Graduate      | \$12,862,600         | \$26,490,205         | \$6,657,837          | \$46,010,641          |
| Undergraduate | \$10,111,084         | \$43,423,347         | \$66,898,413         | \$120,432,844         |
| <b>Total</b>  | <b>\$172,498,840</b> | <b>\$444,653,700</b> | <b>\$731,665,125</b> | <b>\$1,348,817,66</b> |

Sources: MPHEC, CAMET, AAU.

**Table A3: Economic impacts of NS universities exports**

| (\$000s)   | Direct      | Indirect  | Induced   | Province    | Canada      |
|------------|-------------|-----------|-----------|-------------|-------------|
| Output     | \$1,498,051 | \$398,111 | \$414,282 | \$2,310,444 | \$2,884,205 |
| GDP        | \$1,014,599 | \$219,094 | \$268,510 | \$1,502,203 | \$1,788,598 |
| Income     | \$627,864   | \$128,336 | \$107,738 | \$863,939   | \$1,023,316 |
| Jobs (FTE) | 15,775      | 2,696     | 2,524     | 20,996      | 23,697      |
| Prov taxes | \$118,424   | \$25,329  | \$60,927  | \$204,679   |             |
| Fed taxes  | \$104,452   | \$17,668  | \$32,565  | \$154,684   | \$156,556   |

Source: Statistics Canada interprovincial input-output economic model, 2019.

**Table A5: NS universities compared to other top 10 exporters, 2022**

| Rank | Industry                                  | Exports \$000s |
|------|---|----------------|
| 1    | Universities                              | \$1,498,051    |
| 2    | Seafood Product Preparation and Packaging | \$1,298,960    |
| 3    | Fishing                                   | \$1,269,876    |
| 4    | Tire Manufacturing                        | \$1,191,275    |
| 5    | Paper Mills                               | \$294,685      |
| 6    | Sawmills and Wood Preservation            | \$240,640      |
| 7    | Frozen Food Manufacturing                 | \$232,782      |
| 8    | Navigational Instruments Manufacturing    | \$138,389      |
| 9    | Recyclable metal merchant wholesalers     | \$128,722      |
| 10   | Laminated Plastic Manufacturing           | \$102,814      |

Source: Industry Canada On-Line Trade Database.

Note: Only international exports are shown for other exporters.

**Table A5: NB enrolment by origin, 2021/22**

|               | Other Atlantic | Other Canada | International | Total        |
|---------------|----------------|--------------|---------------|--------------|
| Full-time     |                |              |               |              |
| Graduate      | 74             | 200          | 128           | 402          |
| Undergraduate | 724            | 1,626        | 3,779         | 6,129        |
| Part-time     |                |              |               |              |
| Graduate      | 9              | 51           | 18            | 78           |
| Undergraduate | 51             | 216          | 142           | 409          |
| <b>Total</b>  | <b>858</b>     | <b>2,093</b> | <b>4,067</b>  | <b>7,018</b> |

Sources: AAU provided 2022/23 international enrolments; MPHEC provided 2021/22 other Atlantic and other Canada breakdown. Memorial University provided their data.

**Table A6: NB student spending by origin, 2022/23**

|               | Other Atlantic      | Other Canada        | International        | Total                |
|---------------|---------------------|---------------------|----------------------|----------------------|
| Full-time     |                     |                     |                      |                      |
| Graduate      | \$2,879,172         | \$7,332,354         | \$3,045,892          | \$13,257,418         |
| Undergraduate | \$28,133,362        | \$60,891,279        | \$171,097,443        | \$260,122,084        |
| Part-time     |                     |                     |                      |                      |
| Graduate      | \$102,981           | \$671,905           | \$238,363            | \$1,013,248          |
| Undergraduate | \$985,148           | \$4,114,887         | \$3,539,173          | \$8,639,208          |
| <b>Total</b>  | <b>\$32,100,663</b> | <b>\$73,010,424</b> | <b>\$177,920,872</b> | <b>\$283,031,958</b> |

Sources: MPHEC, CAMET, AAU.

**Table A7: Economic impacts of NB universities exports**

| (\$000s)   | Direct    | Indirect | Induced  | Province  | Canada    |
|------------|-----------|----------|----------|-----------|-----------|
| Output     | \$325,989 | \$85,257 | \$85,154 | \$496,399 | \$624,039 |
| GDP        | \$215,091 | \$46,098 | \$53,008 | \$314,196 | \$381,087 |
| Income     | \$140,360 | \$27,105 | \$21,870 | \$189,335 | \$227,100 |
| Jobs (FTE) | 3,349     | 579      | 517      | 4,445     | 5,105     |
| Prov taxes | \$25,972  | \$5,144  | \$13,410 | \$44,526  |           |
| Fed taxes  | \$23,155  | \$3,651  | \$7,119  | \$33,924  | \$34,526  |

Source: Statistics Canada interprovincial input-output economic model, 2019.

**Table A8: NB universities compared to other top 10 exporters, 2022**

| Rank | Industry                  | Exports \$000s |
|------|---------------------------|----------------|
| 1    | Petroleum refineries      | \$11,842,276   |
| 2    | Seafood manufacturing     | \$1,378,927    |
| 3    | Sawmills and wood         | \$921,268      |
| 4    | Pulp mills                | \$720,647      |
| 5    | Paper mills               | \$512,571      |
| 6    | Universities              | \$325,989      |
| 7    | Aquaculture               | \$291,914      |
| 8    | Frozen food manufacturing | \$284,419      |
| 9    | Electric power generation | \$263,585      |
| 10   | Fishing                   | \$207,576      |

Source: Industry Canada On-Line Trade Database.

Note: Only international exports are shown for other exporters.

**Table A9: PEI enrolment by origin, 2021/22**

|                  | Other Atlantic | Other Canada | International | Total        |
|------------------|----------------|--------------|---------------|--------------|
| <b>Full-time</b> |                |              |               |              |
| Graduate         | 5              | 327          | 146           | 478          |
| Undergraduate    | 306            | 2,401        | 1,557         | 4,264        |
| <b>Part-time</b> |                |              |               |              |
| Graduate         | -              | 2            | 1             | 3            |
| Undergraduate    | 17             | 318          | 80            | 415          |
| <b>Total</b>     | <b>328</b>     | <b>3,048</b> | <b>1,784</b>  | <b>5,160</b> |

Sources: AAU provided 2022/23 international enrolments; MPHEC provided 2021/22 other Atlantic and other Canada breakdown. Memorial University provided their data.

**Table A10: PEI student spending by origin, 2022/23**

|                  | Other Atlantic     | Other Canada        | International       | Total                |
|------------------|--------------------|---------------------|---------------------|----------------------|
| <b>Full-time</b> |                    |                     |                     |                      |
| Graduate         | \$142,406          | \$9,313,323         | \$5,613,543         | \$15,069,271         |
| Undergraduate    | \$9,099,096        | \$71,395,198        | \$64,818,573        | \$145,312,867        |
| <b>Part-time</b> |                    |                     |                     |                      |
| Graduate         | \$0                | \$28,481            | \$19,224            | \$47,706             |
| Undergraduate    | \$252,753          | \$4,727,962         | \$1,665,217         | \$6,645,932          |
| <b>Total</b>     | <b>\$9,494,255</b> | <b>\$85,464,963</b> | <b>\$72,116,557</b> | <b>\$167,075,775</b> |

Sources: MPHEC, CAMET, AAU.

**Table A11: Economic impacts of PEI university exports**

| (\$000s)   | Direct    | Indirect | Induced  | Province  | Canada    |
|------------|-----------|----------|----------|-----------|-----------|
| Output     | \$182,194 | \$36,989 | \$38,075 | \$257,258 | \$346,743 |
| GDP        | \$121,855 | \$21,657 | \$25,258 | \$168,770 | \$214,218 |
| Income     | \$77,253  | \$11,474 | \$9,521  | \$98,248  | \$122,738 |
| Jobs (FTE) | 1,719     | 256      | 246      | 2,220     | 2,640     |
| Prov taxes | \$14,578  | \$2,214  | \$6,245  | \$23,037  |           |
| Fed taxes  | \$12,855  | \$1,560  | \$3,297  | \$17,712  | \$18,702  |

Source: Statistics Canada interprovincial input-output economic model, 2019.

**Table A12: PEI universities compared to other top 10 exporters, 2022**

| Rank | Industry                      | Exports \$000s |
|------|-------------------------------|----------------|
| 1    | Frozen food manufacturing     | \$552,356      |
| 2    | Seafood manufacturing         | \$377,917      |
| 3    | Universities                  | \$182,194      |
| 4    | Pharmaceutical and medicine   | \$147,702      |
| 5    | Vegetable farming             | \$141,164      |
| 6    | Aerospace manufacturing       | \$94,716       |
| 7    | Engine, turbine manufacturing | \$89,439       |
| 8    | 32519 - Other basic chemical  | \$77,017       |
| 9    | Fishing                       | \$70,096       |
| 10   | Aquaculture                   | \$39,999       |

Source: Industry Canada On-Line Trade Database.

Note: Only international exports are shown for other exporters.

**Table A13: NL enrolment by origin, 2021/22**

|               | Other Atlantic | Other Canada | International | Total        |
|---------------|----------------|--------------|---------------|--------------|
| Full-time     |                |              |               |              |
| Graduate      | 126            | 432          | 1,933         | 2,491        |
| Undergraduate | 384            | 521          | 2,425         | 3,330        |
| Part-time     |                |              |               |              |
| Graduate      | 182            | 321          | 18            | 521          |
| Undergraduate | 96             | 206          | 126           | 428          |
| <b>Total</b>  | <b>788</b>     | <b>1,480</b> | <b>4,502</b>  | <b>6,770</b> |

Sources: AAU provided 2022/23 international enrolments; MPHEC provided 2021/22 other Atlantic and other Canada breakdown. Memorial University provided their data.

**Table A14: NL student spending by origin, 2022/23**

|               | Other Atlantic    | Other Canada      | International      | Total              |
|---------------|-------------------|-------------------|--------------------|--------------------|
| Full-time     |                   |                   |                    |                    |
| Graduate      | 3,706,446         | 13,096,615        | 64,412,274         | 81,215,335         |
| Undergraduate | 12,486,236        | 16,940,961        | 117,424,413        | 146,851,610        |
| Part-time     |                   |                   |                    |                    |
| Graduate      | 5,171,756         | 9,314,213         | 571,004            | 15,056,972         |
| Undergraduate | 2,741,399         | 5,882,585         | 4,543,867          | 13,167,852         |
| <b>Total</b>  | <b>24,105,837</b> | <b>45,234,375</b> | <b>186,951,558</b> | <b>256,291,769</b> |

Sources: MPHEC, CAMET, AAU.

**Table A15: Economic impacts of NL university exports**

| (\$000s)   | Direct    | Indirect | Induced  | Province  | Canada    |
|------------|-----------|----------|----------|-----------|-----------|
| Output     | \$399,503 | \$72,474 | \$90,656 | \$562,632 | \$689,029 |
| GDP        | \$303,394 | \$41,607 | \$58,471 | \$403,472 | \$467,660 |
| Income     | \$172,310 | \$25,620 | \$24,093 | \$222,024 | \$258,020 |
| Jobs (FTE) | 3,781     | 437      | 504      | 4,722     | 5,320     |
| Prov taxes | \$29,074  | \$4,094  | \$15,383 | \$48,550  |           |
| Fed taxes  | \$27,328  | \$3,151  | \$8,140  | \$38,618  | \$37,671  |

Source: Statistics Canada interprovincial input-output economic model, 2019.

**Table A16: NL universities compared to other top 10 exporters, 2022**

| Rank | Industry                                 | Exports \$000s |
|------|--|----------------|
| 1    | Oil and gas extraction                   | \$9,590,031    |
| 2    | Iron ore mining                          | \$3,025,826    |
| 3    | Non-ferrous metal refining               | \$1,203,758    |
| 4    | Seafood manufacturing                    | \$1,154,886    |
| 5    | Universities                             | \$399,503      |
| 6    | Paper mills                              | \$195,447      |
| 7    | Non-ferrous metal manufacturing          | \$125,821      |
| 8    | Electric power generation                | \$106,613      |
| 9    | Copper, nickel, lead and zinc ore mining | \$97,296       |
| 10   | Sawmills and wood                        | \$37,852       |

Source: Industry Canada On-Line Trade Database.

Note: Only international exports are shown for other exporters.