

SMARTER TOGETHER

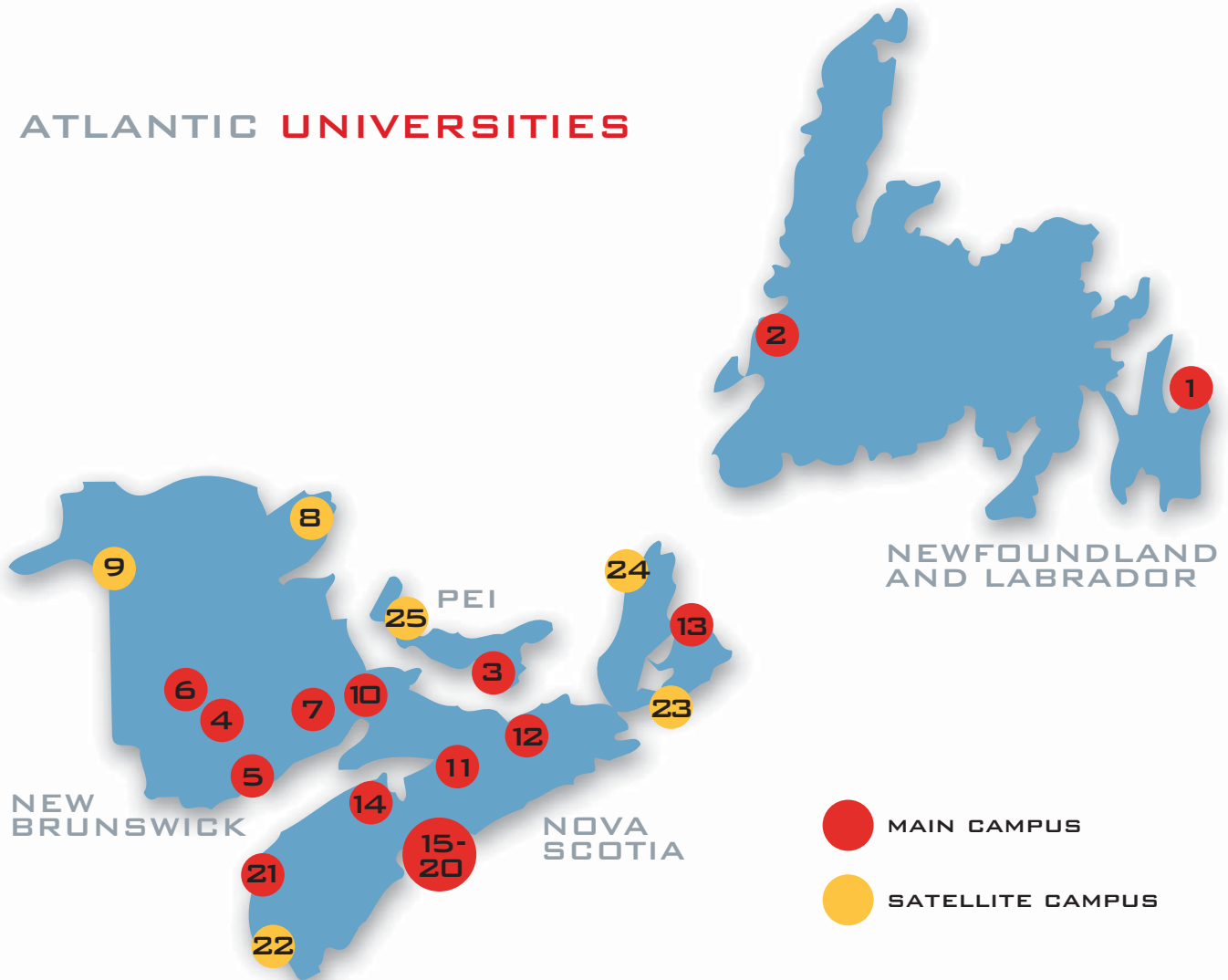
The Economic Impact of Universities in the Atlantic Provinces

March, 2006

Report Summary



ATLANTIC UNIVERSITIES



Memorial University of Newfoundland

1. St. John's
2. Corner Brook

University of Prince Edward Island

3. Charlottetown

University of New Brunswick

4. Fredericton
5. Saint John
6. St. Thomas University

Université de Moncton

7. Moncton
8. Shippagan
9. Edmonston

10. Mount Allison University

11. Nova Scotia Agricultural College

12. St. Francis Xavier University
13. Cape Breton University
14. Acadia University
15. Dalhousie University
16. University of King's College
17. Saint Mary's University
18. Mount Saint Vincent University
19. NSCAD University
20. Atlantic School of Theology

Université Sainte-Anne

21. Pointe-de-L'Église
22. Tusket
23. Petit-de-Grat
24. Saint-Joseph-du-Moine
25. Wellington

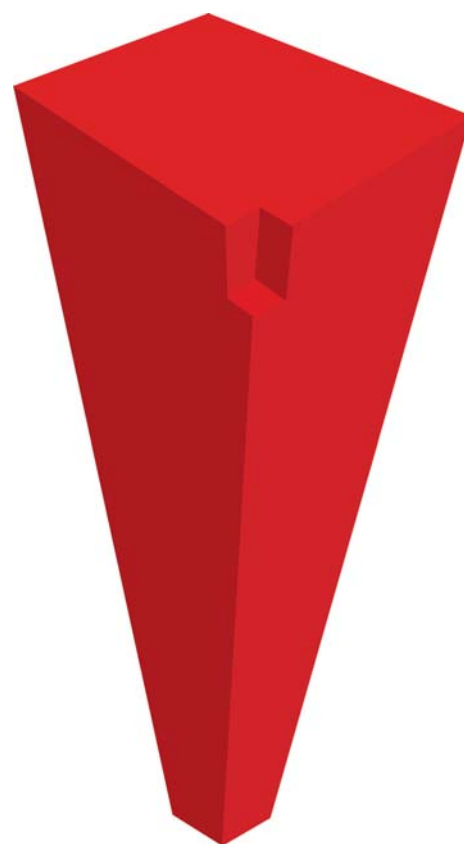
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The Economic Impact of Universities in the Atlantic Provinces

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INTRODUCTION

Universities contribute profoundly to the intellectual, social, cultural, spiritual and economic well-being of their communities, their provinces, their region and their country and they are hugely significant to encourage future growth.

This is exceptionally true of Atlantic Canada and the 17 universities that make up the region's academic community. While it is known intuitively that universities contribute to the capacity of communities, provinces and the country, it is important to understand how the pieces add up in Atlantic Canada.

The Association of Atlantic Universities (AAU) and the Atlantic Canada Opportunities Agency (ACOA) have partnered on an economic impact study to understand how the sum of the parts add up and what's next for Atlantic Canada's universities.

Conducted by Gardner Pinfold Consulting Economists Ltd., "The Economic Impact of Universities in the Atlantic Provinces" reinforces the perspective that Atlantic Canada's universities are a powerful strategic partner for governments, economic development agencies, regional advocacy organizations and communities to advance and grow Atlantic Canada's knowledge economy.

Here's why:

- Graduates provide our growing local, national and international economies with the human capital they need to continue to advance, innovate and diversify.
- Universities conduct research, that fuels innovation in various fields, that, in turn, leads to growth and development.
- They are a focal point for arts and culture, for debate on public issues, for athletics and recreation and other community enriching activities.
- In Atlantic Canada, universities deliver a comprehensive program of continuing education and a deep commitment to lifelong learning.
- They reach out around the globe to provide help in health, scientific, educational, environmental and resource issues.

More than the sum of all its parts, it is the over-riding and significant economic impact universities have in acting together and in partnership with others that really demonstrates the value of the sector.

This study helps investigate, analyze and report on the role of Atlantic Canada's universities on the economic and social well-being of the region today and the options to increase the impact significantly in the future.

TANGIBLES: WHAT THE UNIVERSITY SECTOR IS WORTH

Atlantic universities are a \$4.4 billion a year industry, based on direct and indirect expenditures. Money spent on support operations and new facility construction create jobs and income on campus, and, through the multiplier effect, throughout the regional economy. Students also spend money on a wide range of goods and services off campus which also helps support the local economy.

Creating Jobs, Sustaining Communities

All together, Atlantic universities employ 16,655 faculty and staff. An additional 3,000 to 4,000 students work as researchers, teaching assistants and demonstrators.

Universities in the provincial capital cities account for 2.5 to 5% of total employment in their cities. In small towns, universities account for 15 to 30% of total employment.

But what do these figures mean?

Let's look at these employment numbers compared to the leading industries of the towns and cities the universities are in. They are quite astounding.

- Memorial University is second only to the provincial government in providing jobs – well ahead of manufacturing, wholesale trade and financial services.
- Combined employment by the six Halifax universities is more than that of the provincial government.
- At UNB and St. Thomas, their employment rate is second only to the provincial government.
- UPEI has a comparable number of employees as either the wholesale trade or the finance and insurance sectors in Charlottetown.



ECONOMIC OUTPUT OF ATLANTIC UNIVERSITIES:
\$4.4 BILLION

FAST FACTS ON ATLANTIC UNIVERSITIES

17 universities

77,000
full-time students
(20% from outside the region)

14,500
part-time students

16,655
faculty and staff

- 2.5-5.0 % of employment in provincial capitals
- 15-30 % of employment in small university towns

27,320 total jobs

250,000 local alumni

\$4.4 billion
economic output

\$2 billion in Gross
Domestic Product

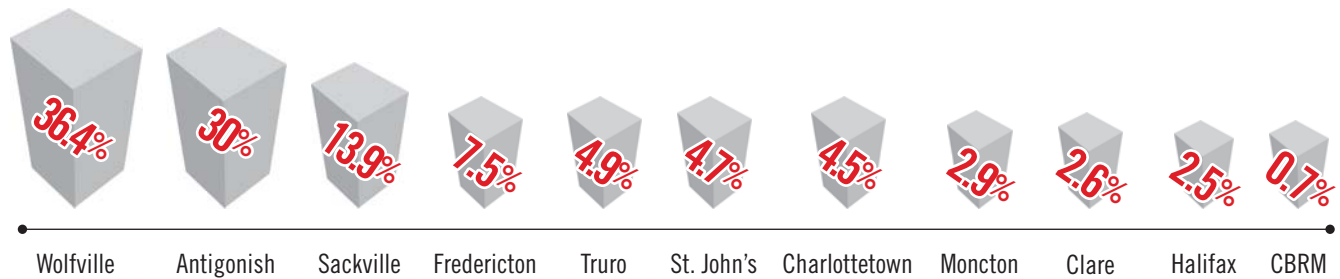
\$466.8 million
in federal and provincial
taxes

\$510 million in R&D

63% of R&D
in the region

International students
contribute \$100 million
in export earnings per
year

ATLANTIC UNIVERSITIES AS % OF AREA ECONOMY



Salaries

Total payroll for Atlantic universities is more than \$1 billion. Virtually 100% of this was paid to residents of the communities in which the universities are located.

University faculty and staff tend to be paid above the average incomes. That means that the average university payroll has an economic impact on local economies far greater than the actual number of people employed.

- Income impact is often at least double the employment impact.
- Universities generate 4.1 to 12.5% of the earned income in the major urban centres.
- In smaller towns, universities account for 25% to more than 50% of the income generated.

Stable Jobs

It's not just better paying jobs that universities create, but also highly stable jobs. Universities are less vulnerable to the ups and downs of the business cycle.

As counter-intuitive as it may seem, only 50-55% of people reporting income held full-time, full-year jobs in Atlantic Canada. In contrast, almost all university jobs are full-time, full-year.

Keeping the Machine Oiled

Atlantic universities spent \$635 million on a wide range of goods and services, most of which are purchased in the community.

Atlantic universities also invest in the construction of various campus buildings. Between 2000 and 2004, they spent \$210 million.

This construction has allowed the institutions to meet the needs for improved research infrastructure, more residential units and more classrooms and facilities which in turn helps maintain the economic impact of the university communities.

Students attending Atlantic universities spent an estimated \$980 million in 2004 – \$580 million in tuition; \$400 million to the wider economy (rent, food, etc.).

Visitors to the universities also inject money into the economy. On a local level, convocation alone accounts for impacts of \$2.5 to \$4 million a year.

Putting it All Together

The total direct spending is more than \$2 billion a year. Every year.

Including spending on operations and capital projects combined with spending by students and visitors, the figure actually comes up to \$2.08 billion.

The economic impact goes well past the obvious.

Universities mean more to their communities, their provinces and their region than just about any other single industry. And that is just the beginning.

INTANGIBLES: WHAT A POST-SECONDARY EDUCATION IS WORTH

For the Individual, it's a Better Income

Quantifiable measures such as income clearly show the value of a post-secondary education. Graduates simply earn more, period.

The intangible benefits include a life-long love of learning, self-improvement and interesting work.

There are many factors, costs and financial benefits to getting a degree, but the bottom line looks pretty clear.

- Investing in a bachelor's degree means an additional \$450,000 in lifetime earnings.
- Investing in an advanced degree will add \$750,000 over a lifetime.

For the Economy, it's Growth

Although it's obvious to all observers that higher education leads directly to economic growth, it is challenging to quantify exactly how. Evidence suggests that it is the noted improvement in individual achievement and productivity.

According to current knowledge, education accomplishment has a clear impact on economic growth.

INDIVIDUALS WITH A FIRST
UNIVERSITY DEGREE
EARN AN AVERAGE OF

60
TO **70**%

MORE PER YEAR

THAN INDIVIDUALS WITH A
HIGH SCHOOL DIPLOMA

- Through its impact on overall productivity, a university educated workforce accounts for up to 20% of the growth in total output in G7 countries.
- Differences in educational attainment seem to accurately mirror the differences in GDP variations among OECD members.
- Investment in OECD countries positively correlates with the extent of secondary education in the workforce.
- Each additional year of education raises output per capita by 6%.

If it seems self-evident that greater education results in greater productivity, greater growth and greater social benefits, then we had better take the lesson to heart.

INVESTING IN HUMAN CAPITAL

Contributing financially to post-secondary education, from both the public and private sector, is an investment, not an expense. As with any investment, there is a return for the investor, the investee, and the greater good.

The return on investment by the public is economic growth. A more educated workforce is likely to be more innovative and more productive. It also adopts, applies and adapts new technology more readily.

Human welfare is also a major beneficiary. With individuals having much better personal development, society receives improved public health and safety, a better environment and greater participation in community and political processes. These, in turn, feed back into better economic performance, and so on in an upward motion.

The People's Contribution

Through federal and provincial governments, Canada invested \$27.7 billion in post-secondary education in 2004-05. That's about 2.1% of our GDP, or about \$865 for every person in Canada.

TOTAL ENROLMENT IN ATLANTIC PROVINCES UNIVERSITIES, 2005

91,645



In Atlantic Canada, we invested \$1.9 billion or 2.5% of regional GDP in post- secondary education, and under \$800 per person. The provinces represent the single largest source of university funding, however cuts to federal transfer payments have caused a reduction in university funding. Despite lower per capita spending, strangely enough, it accounts for a higher proportion of GDP than the national average. However, as provincial governments have recently become stronger fiscally, reinvestment in universities has begun to improve.

Contributions from Students – Present and Past

Total enrolment has risen 74% since 1980. There has been fairly steady growth between 1980 and 1992; a period of decline from 1993 to 1999; a return to growth between 2000 and 2003; followed by two years of decline to 2005.

Notably, many institutions are recruiting from well outside their traditional student base. And this strategy is working with an increase in students from outside the province and the country.

University students continue to exert an impact on local economies beyond the years they actually attend classes. Many graduates stay in the region. At some institutions as many as 80% of them – providing much needed innovation, growth and diversity.

The Changing Face of Atlantic Universities

A look at virtually any Atlantic campus will reveal that our universities are becoming ethnically diverse. Over the past 15 years, the rate of growth in students from outside the region has outstripped that of inside the region at most universities.

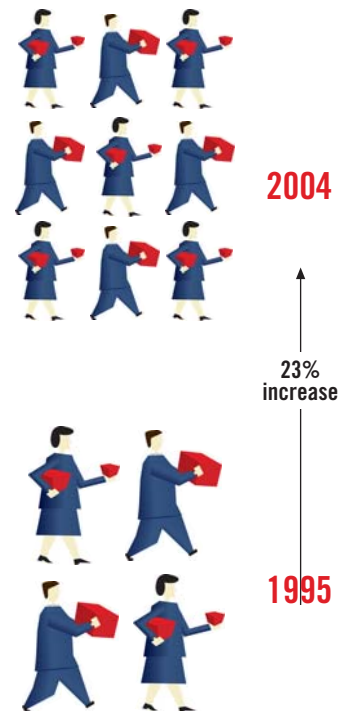
International students represent more than \$100 million per year in “export” earnings.

The cultural diversity of students is also helping to shape provincial immigration policies. Immigration issues set up a potentially winning cycle.

Students come here for quality of life and education; some then stay and contribute to the improvement of that quality which, once again, attracts more international students, and so on. Added to this are the families who move to the region to be close to offspring at these institutions.

This is a positive trend for everyone. The provincial economies need new immigration and retention to fuel present, and especially future, growth.

INTERNATIONAL STUDENTS ATTENDING ATLANTIC UNIVERSITIES



Graduates

Atlantic universities award 17,000 degrees every year, up from 10,000 in 1980. This includes some 3,500 graduate and professional degrees.

Since 2001, the number of people with degrees entering the workforce in the region has climbed by an estimated 40–50,000.

What's Ahead?

Good news: participation rate continues to be five-to-nine percentage points above the national average.

Bad news: demographics are heading downward, so growth will be adversely affected.

Good news: we are attracting more students from outside the region due to a number of academic and lifestyle attributes.

DEPTH OF RESEARCH

Innovation and Growth

In many parts of Canada and North America, private industry is a huge sponsor of research & development. Indeed, many innovations come from privately funded initiatives.

In Atlantic Canada, there are few companies of sufficient capacity and resources to maintain meaningful R&D. Here, it is the universities, funded primarily by the federal government's national granting councils, that fulfill this vital role.

As important as the funding is to the universities and their communities, the real value in R&D is not in the funding, but in the results. These are measured by how innovative they are, especially as a determinant of economic and social growth, and development.

These factors all lead to one fundamental question: are we on a path that will take us to improved innovation, productivity, competitiveness and stronger growth? How can we extract more long-term benefits from the R&D investments?

Rising Research Funding

Investment in R&D in Canada has almost doubled over the past decade. In Atlantic Canada it has increased by 65%, rising from \$520 million to about \$850 million.

In the Atlantic provinces, higher education and the federal government contribute 36% and 33% respectively to R&D as opposed to the national average of 15% and 19%.

Leading the R&D Charge

Atlantic universities are a vital force in R&D, investing \$510 million on the direct and indirect costs of R&D. Of all the R&D conducted in Atlantic Canada, universities accounted for 63% of it.

With commercialization considered to be one of the most important aspects of R&D, the low rate of participation of the private sector in the region is certainly cause for concern.

R&D – The Basis for Innovation and Growth

Between 1994 and 2003, Canadian higher education conducted an estimated \$52.2 billion in research. One third of the funding came from government, and about half from universities themselves. In Atlantic Canada, this means that for every \$1.00 invested by governments, the private sector, and universities to cover the direct cost of university R&D, universities spend \$1.60 to cover indirect costs.

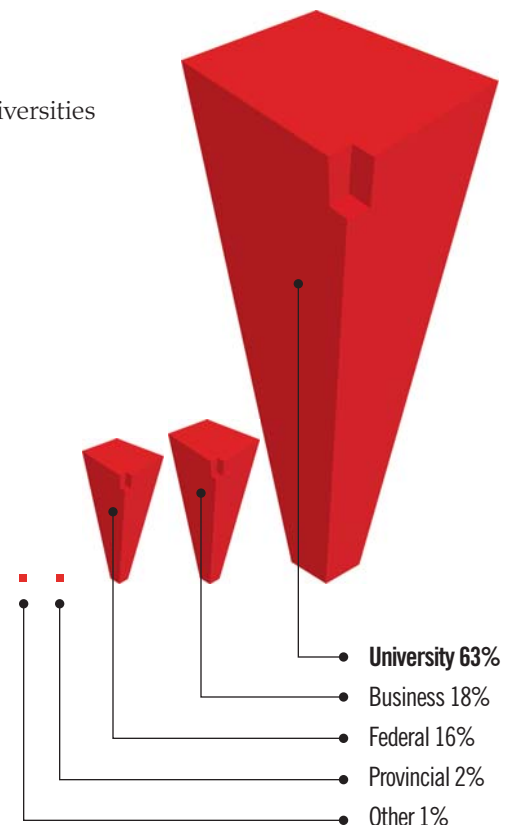
This begs the question, “Are Canadians deriving true value from the research being conducted?” Every university is working on improving commercialization practices and extracting the maximum benefit of every penny going into research.

There have been many successes already.

- With ACOA and the national granting councils, Atlantic Canada's universities have created a network – called Springboard – to advance the commercialization process by providing various support services.
- Atlantic universities have spent \$1.9 million on Intellectual Property management to make commercialization faster and easier.
- Atlantic universities held contracts valued at \$66 million.
- There have been 63 spin-off companies created.
- Income from Intellectual Property has hit \$626,000.
- There have been 51 disclosed inventions and 28 protected inventions.

All activities in R&D in Atlantic Canada continue to fuel growth in economic and social sectors. The dynamic impact of all this R&D translates into \$3.0 billion per year.

ATLANTIC PROVINCES R&D SPENDING BY PERFORMING SECTORS, 2003-04



Building the Perfect R&D

Universities create more economic growth through what they produce, not what they consume. What they produce is knowledge. Knowledge comes from research and is transformed into action. This then leads to innovation. A high capacity to innovate comes from four major factors:

- The number and ability of skilled people employed in research and development attract more research projects.
- The share of GDP spent on secondary and tertiary education has a direct impact on the quality of workers available to go into R&D.
- The percentage of R&D funding from private industry indicates whether cluster-specific funding is a good idea. The more favourable the innovation environment, the higher private R&D spending will be.
- The percentage of R&D performed by universities can attract greater private participation. It's common sense that private industry would prefer to have research performed by institutions with a proven track record.

ATLANTIC UNIVERSITIES: WHO THEY ARE AND WHAT THEY DO

While this study makes a strong case that universities are bigger than the sum of their parts. What follows is a top line look at each university.

New Brunswick

Université de Moncton. The leading French-language university in Atlantic Canada, it also has campuses in Shippagan and Edmundston. Along with traditional undergraduate programs, the university has a long history in technology-based research. It has developed the province's first wind atlas and has prospects in the development of alternative energy projects.

www.umoncton.ca

- 6,400 students
- 1,300 faculty and staff
- Annual expenditures of \$100 million
- Receives \$6.5 million in research funding

Mount Allison University. One of Canada's leading undergraduate universities, it prides itself on its "residential campus". It achieves this by capping its enrolment. Mount Allison is home to the Centre for Canadian Studies, the Aboriginal Community Development Centre and the Rural and Small Town Programme.

www.mta.ca

- 2,275 students
- 340 faculty and staff
- Annual expenditures of \$47 million
- Receives \$3 million in research funding

University of New Brunswick. The largest university in New Brunswick with main campuses in Fredericton and Saint John. Offers full range of undergraduate and graduate degrees and professional degrees in law, engineering and business. Research institutes at UNB include Institute for Biomedical Engineering, Centre for Nuclear Energy Research, and others.

www.unb.ca

- 12,725 students
- 2,100 faculty and staff
- Annual expenditures of \$229 million
- Receives \$38 million in research funding

www.stthomasu.ca

St. Thomas University. Located in Fredericton, St. Thomas specializes in the liberal arts granting degrees in art, applied art, social work, gerontology, journalism, and education.

- 3,200 students
- 262 faculty and staff
- Annual expenditures of \$30 million
- Receives \$480,000 in research funding

Newfoundland & Labrador

www.mun.ca

Memorial University of Newfoundland. One of Canada's leading comprehensive universities offering a wide range of undergraduate, graduate and professional programs. Particular strengths in marine, health and social sciences, and engineering.

- 18,000 students at two campuses
- 4,760 faculty and staff
- Annual expenditures of \$344 million
- Receives \$70 million in research funding

Nova Scotia

www.acadiau.ca

Acadia University. Generally ranked among the top 3 Canadian undergraduate universities. Pioneered the use of laptop computers as an integral part of the academic program. Active in estuarine and climate change research.

- 4,100 students
- 680 faculty and staff
- Annual expenditures of \$78 million
- Receives \$3 million in research funding

www.astheology.ns.ca

Atlantic School of Theology. Prepares graduate students for the ministry in the Anglican, Roman Catholic and United Church denominations. Affiliated with Saint Mary's, with whom it created the Canadian Centre for Ethics in Public Affairs.

- 148 students
- 26 faculty and staff
- Annual expenditures of \$2.2 million

Cape Breton University. The province's newest university. Offers a unique blend of degree, diploma and certificate programs. Cape Breton University remains very responsive to the needs of the community.

www.capebretonu.ca

- 3,600 students
- 360 faculty and staff
- Annual expenditures of \$43 million
- Receives \$3.8 million in research funding

Dalhousie University. One of the oldest and largest in the region. Undergrad and graduate programs in all major disciplines as well as professional programs of medicine, law, dentistry, pharmacy, engineering and architecture. The leading research institution in Atlantic Canada (based on total research funds).

www.dal.ca

- 16,000 students
- 3,400 faculty and staff
- Annual expenditures of \$400 million
- Receives \$100 million in research funding

University of King's College. King's specializes in Foundation-year humanities and has a well-recognized school of journalism. Affiliated with Dalhousie University, King's is the oldest English-language university in the Commonwealth.

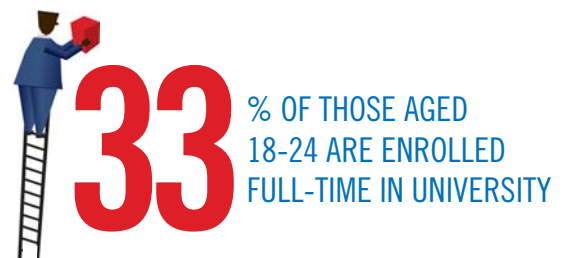
www.ukings.ca

- 1,100 students
- 85 faculty and staff
- Annual expenditures of \$12 million

Mount Saint Vincent University. Mount Saint Vincent University (MSVU) is best known for its small class sizes, unique programs, high-quality faculty, opportunities for students to be involved in research and long-standing tradition of educating women. Liberal arts, science and professional programs, including Public Relations, Child and Youth Study, Tourism and Hospitality Management and Education, attract women and men from around the world.

www.msvu.ca

- 4,600 students
- 600 faculty and staff
- Annual expenditures of \$44 million
- Receives \$1.2 million in research funding



www.nsac.ca

Nova Scotia Agricultural College. Specializes in applied science with a focus on agriculture and life sciences. Research is a core mission with the school ranked as one of the most research intensive in Canada. It is also home to the 16-acre AgriTECH Park, offering incubation, laboratory and industrial space and facilities.

- 750 students
- 240 faculty and staff
- Annual expenditures of \$24 million
- Receives \$6 million in research funding

www.nscad.ca

NSCAD University. One of the country's leading fine arts institutions. Offers undergrad and graduate degrees in craft, design, fine arts and media arts. The NSCAD facilities, located in the heart of Historic Properties, are expected to anchor the emerging new arts and culture district in the city.

- 1,000 students
- 200 faculty and staff
- Annual expenditures of \$13 million

www.usaintanne.ca

Université Sainte-Anne. Campuses in five Nova Scotia communities and one in Prince Edward Island. It meets the needs of the francophone community offering French language degrees in sciences, social sciences, public administration, communications and French studies.

- 500 students
- 125 faculty and staff
- Annual expenditures of \$18 million
- Receives \$2.75 million in research funding

St. Francis Xavier University. Has been ranked as the number one primarily undergraduate university by Maclean’s magazine for the past four straight years. It is home to the renowned Coady International Institute, and has recently opened a new \$25 million science centre.

www.stfx.ca

- 5,200 students
- 900 faculty and staff
- Annual expenditures of \$80 million
- Receives over \$5 million in research funding

Saint Mary’s University. The province’s largest primarily undergraduate university. Especially noted for its commerce and business management programs. Helps attract and retain immigrants with the Teaching English as a Second Language Centre and by hosting the Atlantic Metropolis Centre.

www.smu.ca

- 12,000 students
- 1000 faculty and staff
- Annual expenditures of \$91 million
- Receives \$3.8 million in research funding

Prince Edward Island

University of Prince Edward Island. Ranks among Canada’s top 10 primarily undergraduate universities. Plans to concentrate on further developing its bioscience cluster through research and partnerships.

www.upei.ca

- 4,000 students
- 750 faculty and staff
- Annual expenditures of \$82 million
- Receives \$10 million in research funding

SMARTER TOGETHER: REALIZING THE POTENTIAL OF ATLANTIC CANADA'S UNIVERSITIES

The study tells a compelling story about the impact of universities today.

But these tangible impacts are only half the story. The role of Atlantic Canada's 17 universities is to transfer knowledge – to students and to the wider community. They provide human capital; the leaders, the business people, and the innovators of tomorrow.

The intention for this document is not to be a glimpse of what is. The intention is for this document to be a catalyst, a starting point for future actions by universities, and a catalyst for further partnerships with communities, business, government and regional advocates.

Each university is important. Each partnership is important. We are stronger together. And to sustain this into the future we must also be *smarter together*, and ask ourselves the important questions.

- How can universities be a catalyst to help the region and Canada grow its intellectual assets?
- What more can universities, government, business, industry and communities do to fully leverage our assets and to grow the economy of the region and Canada?
- How can universities use their intellectual assets to grow the region's economy for attracting and retaining new employers and immigrants, improving standards of living, increasing innovation and research?
- What is the role of universities in helping the region take its place as a "have region" in Canada and internationally, as well as maximizing our economic and social potential?
- What more can be done to strengthen the university sector through strategic partnerships?

These are not small questions, but they are essential questions. The Atlantic Provinces have an incredible asset in these 17 universities. They embody tremendous potential for innovation, partnerships and development of human capital. And realizing this potential is essential for the future strength of the region.



ASSOCIATION OF
ATLANTIC
UNIVERSITIES



ASSOCIATION
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DE L'ATLANTIQUE

Full study is available at the AAU website
www.atlanticuniversities.ca

