

An exploration into the equitability of access to higher education in the Maritime provinces over the last twenty years.

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Access to Education is an Important Issue

- More than just *how many*
- *Who* attends also matters





Parents' Educational Attainment

- Focus analysis on parents' educational attainment as a proxy of social background.
- Categorize educational attainment into three levels:

High School Diploma or Less

Some High School
High School Degree
Some Post-Secondary
Some Community College
...

PSE Below Bachelor's Level

Community College Diploma
University Diploma/Certificate
below Bachelor's Level
...

Bachelor's Degree or Above

Bachelor's Degree
Master's Degree
Ph.D.
Professional Degree
...



Data sources

- Graduate Outcomes (GO) Survey data from 7 cohorts.
 - Classes of 1995, 1996, 1999, 2003, 2007, 2012, 2014
- Statistics Canada
 - Table 14-10-0020-01: *Unemployment rate, participation rate and employment rate by educational attainment, annual*



Data from 7 cohorts of GO Survey

- Analysis limited to **graduates** who were:
 - First Degree Holders (enrolled in their degree program without prior postsecondary education),
 - Reported living in one of the three Maritime Provinces in the 12-months before they started their degree, and
 - Reported educational attainment for at least one parent/guardian

Class of	Sample (n)	Percent
1995	2,711	20.7
1996	2,257	17.2
1999	2,008	15.3
2003	1,944	14.8
2007	1,157	8.8
2012	1,589	12.1
2014	1,435	11.0
Total:	13,101	



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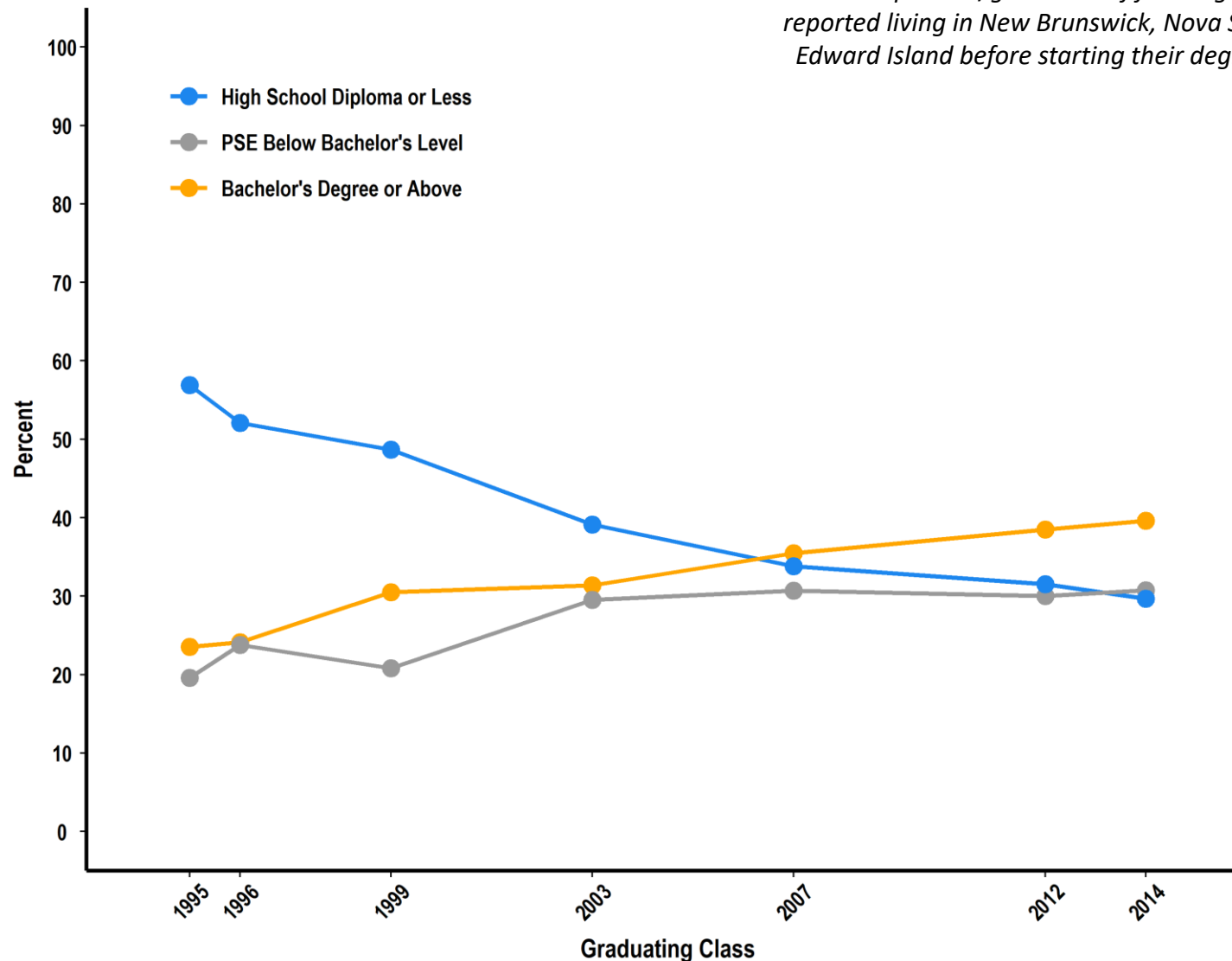
Bachelor's Degree or Above

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Distribution of Maritime Graduates' Parents/Guardians' Educational Attainment

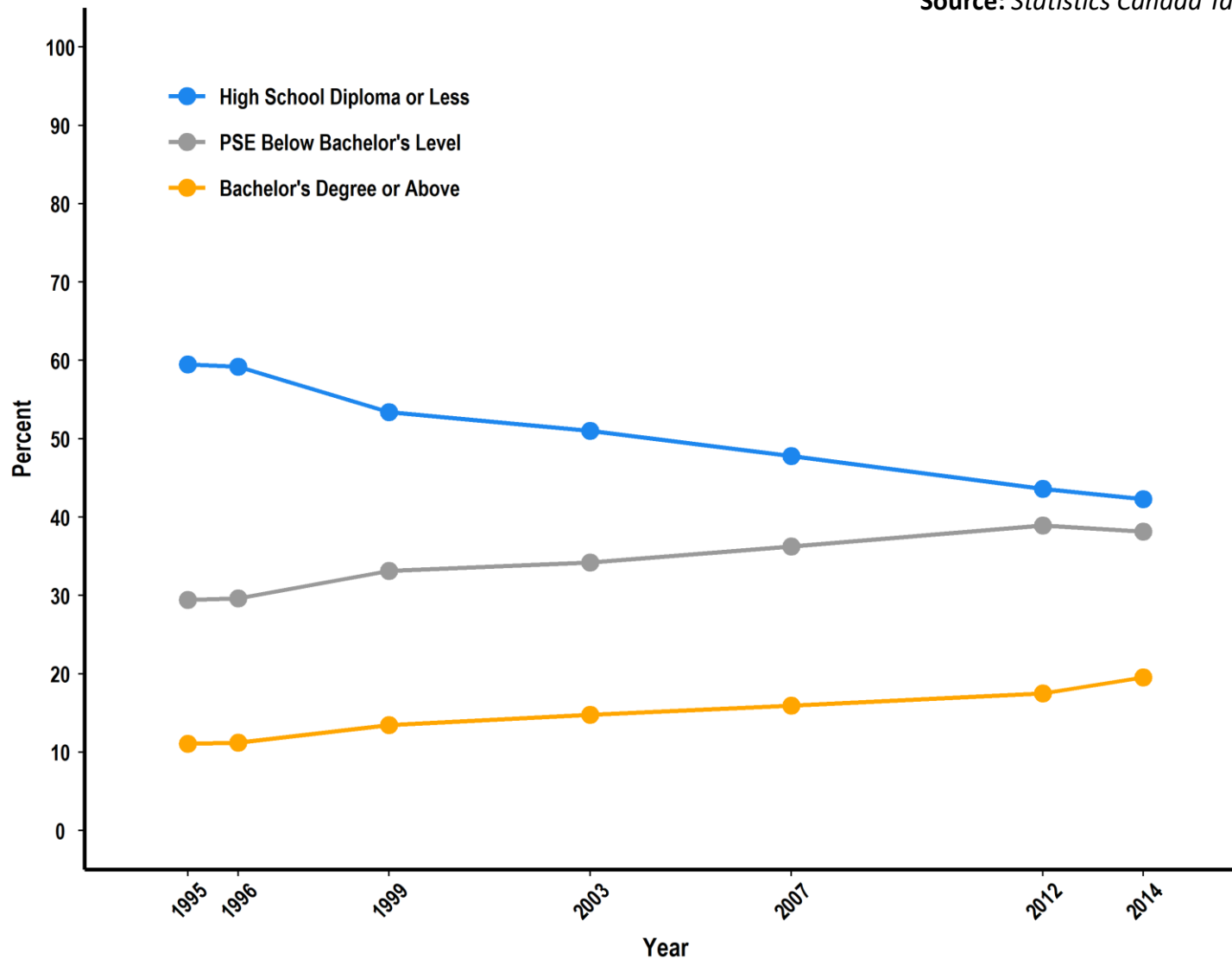
Universe: All parents/guardians of first degree holders who reported living in New Brunswick, Nova Scotia, or Prince Edward Island before starting their degree (n = 25,749)





Distribution of Maritime Residents' (aged 45-64) Educational Attainment

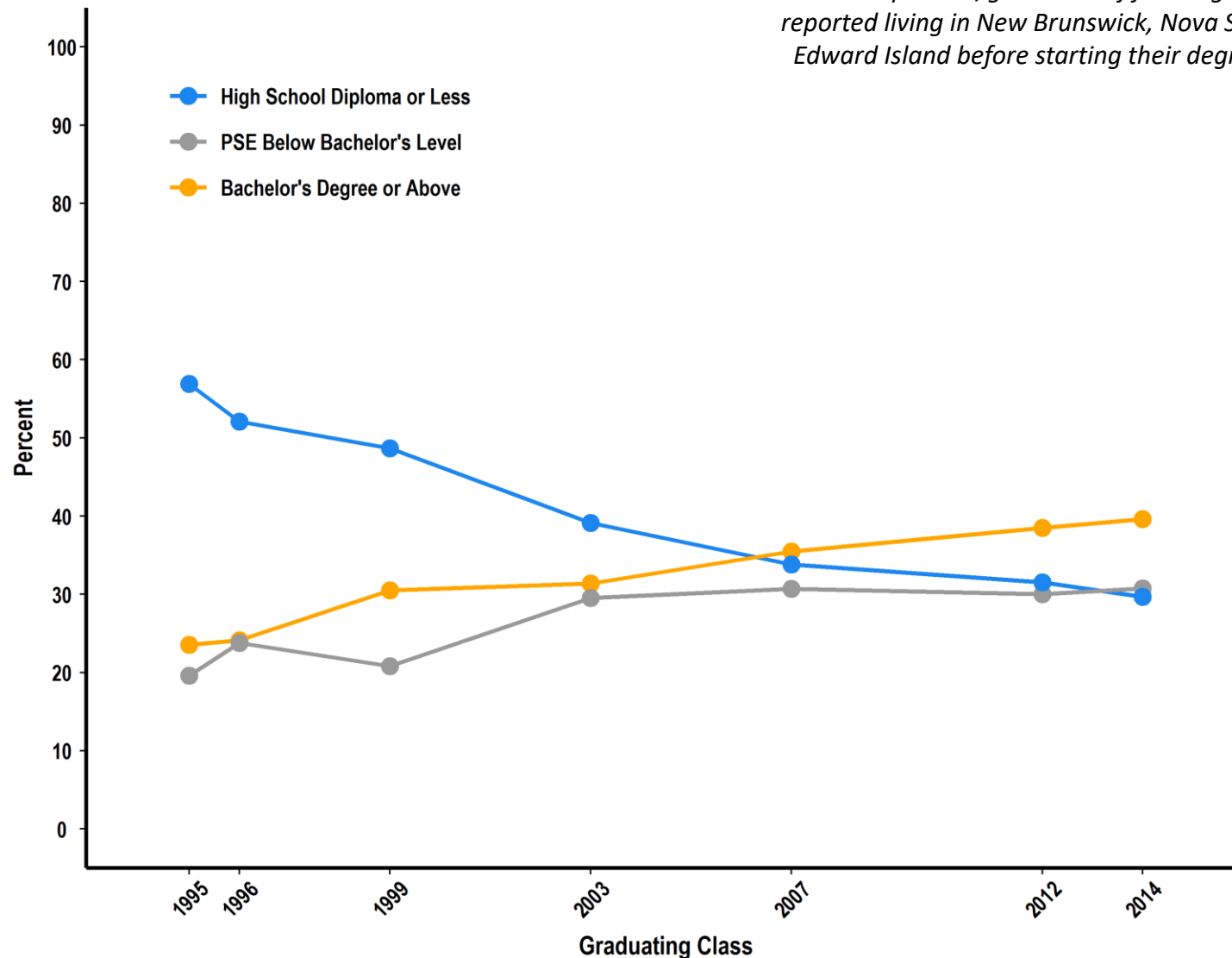
Source: Statistics Canada Table: 14-10-0020-01





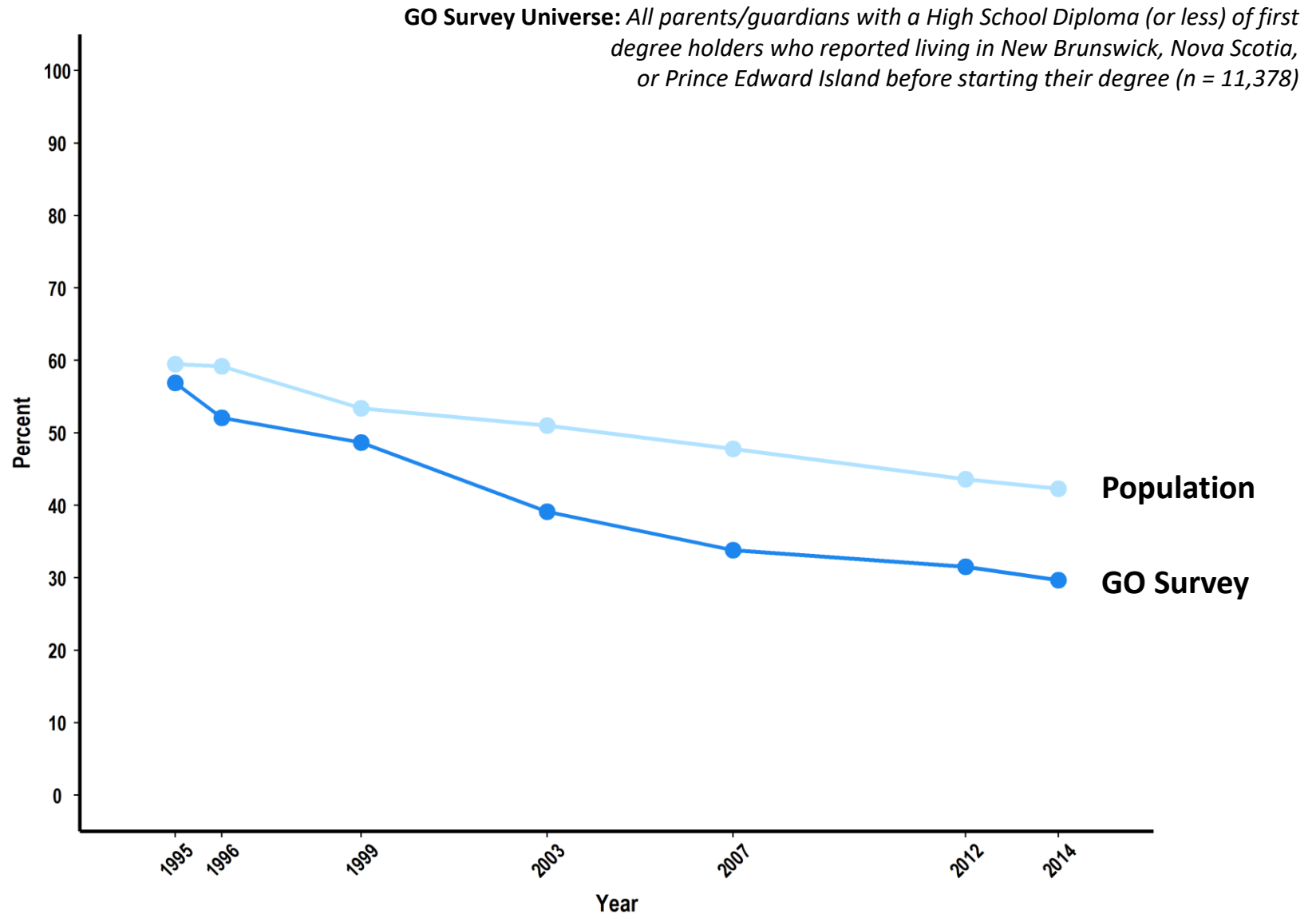
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Comparing Trends: High School Diploma or Less





Another way to look at things: Educational Equity Index (EEI)

- Usher (2004) introduces Educational Equity Index (EEI):

“...measures student SES in relation to the overall SES status of the general population.”

$$EEI = 100 \times \left(\frac{\text{\% of male population aged 45 – 64 with a university credential}}{\text{\% of university students whose fathers have a university credential}} \right)$$



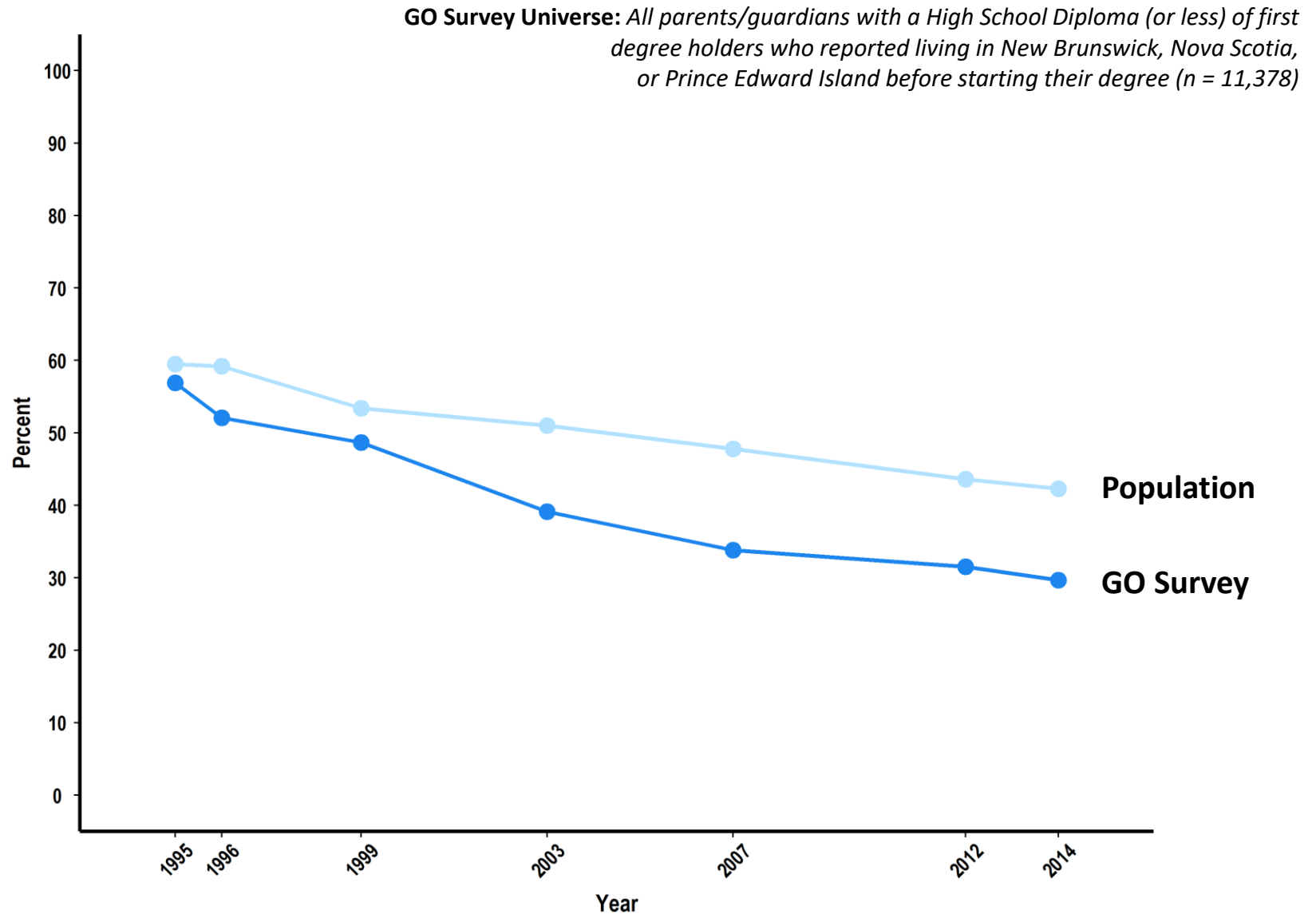
Adjusting the Educational Equity Index (EEI)

- Broadening of Usher's Educational Equity Index (EEI):

$$EEI = 100 \times \left(\frac{\begin{array}{l} \% \text{ of population } (\textbf{both sexes}) \text{ aged } 45 - 64 \text{ whose} \\ \text{highest level of education is a } \textbf{high school diploma (or less)} \end{array}}{\begin{array}{l} \% \text{ of university graduates' parents (or guardians) whose} \\ \text{highest level of education is a } \textbf{high school diploma (or less)} \end{array}} \right)$$

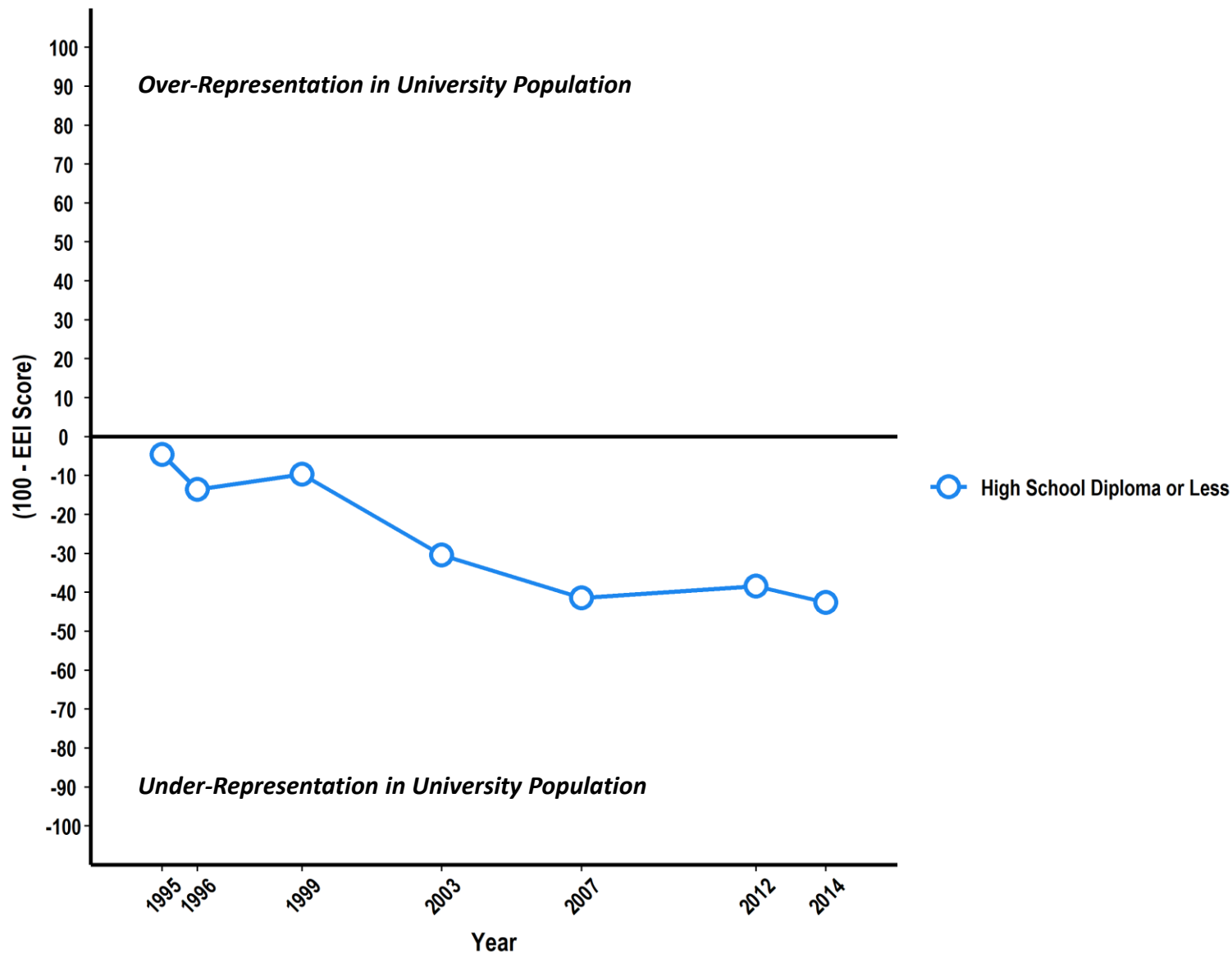


Comparing Trends: High School Diploma or Less





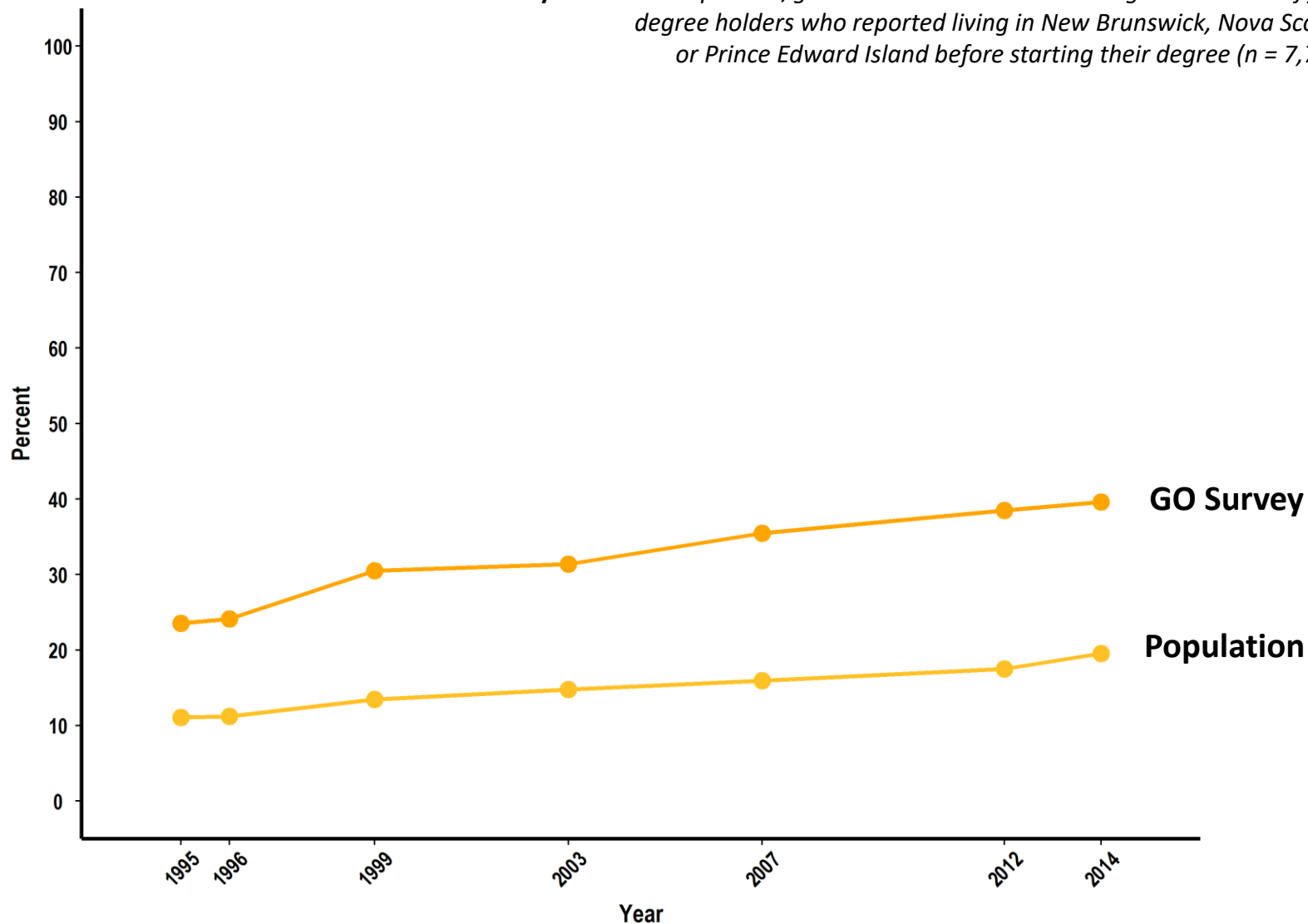
Twenty-Year Trend in EEI for Maritimers





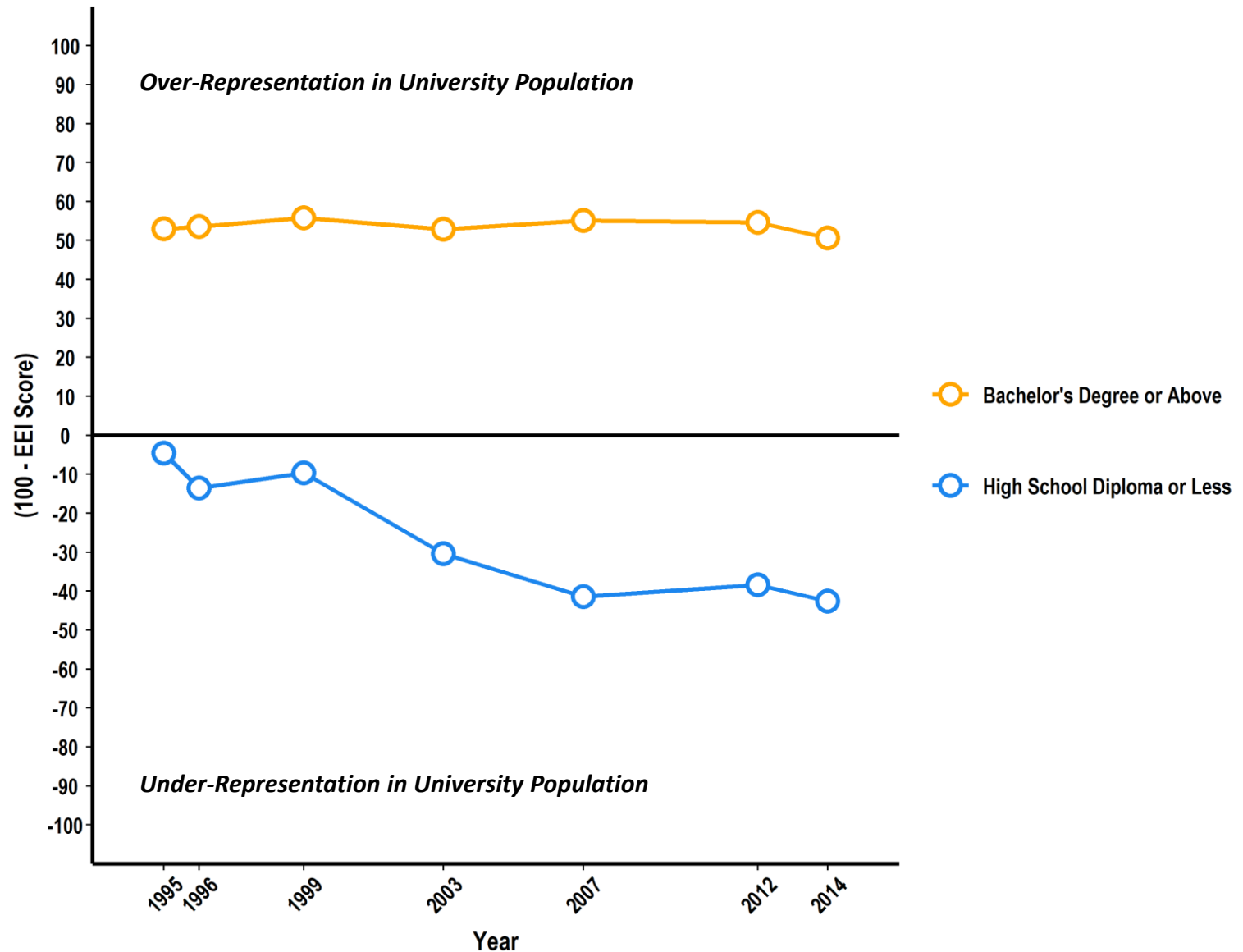
Comparing Trends: Bachelor's Degree or Above

GO Survey Universe: *All parents/guardians with a Bachelor's Degree or Above of first degree holders who reported living in New Brunswick, Nova Scotia, or Prince Edward Island before starting their degree (n = 7,769)*



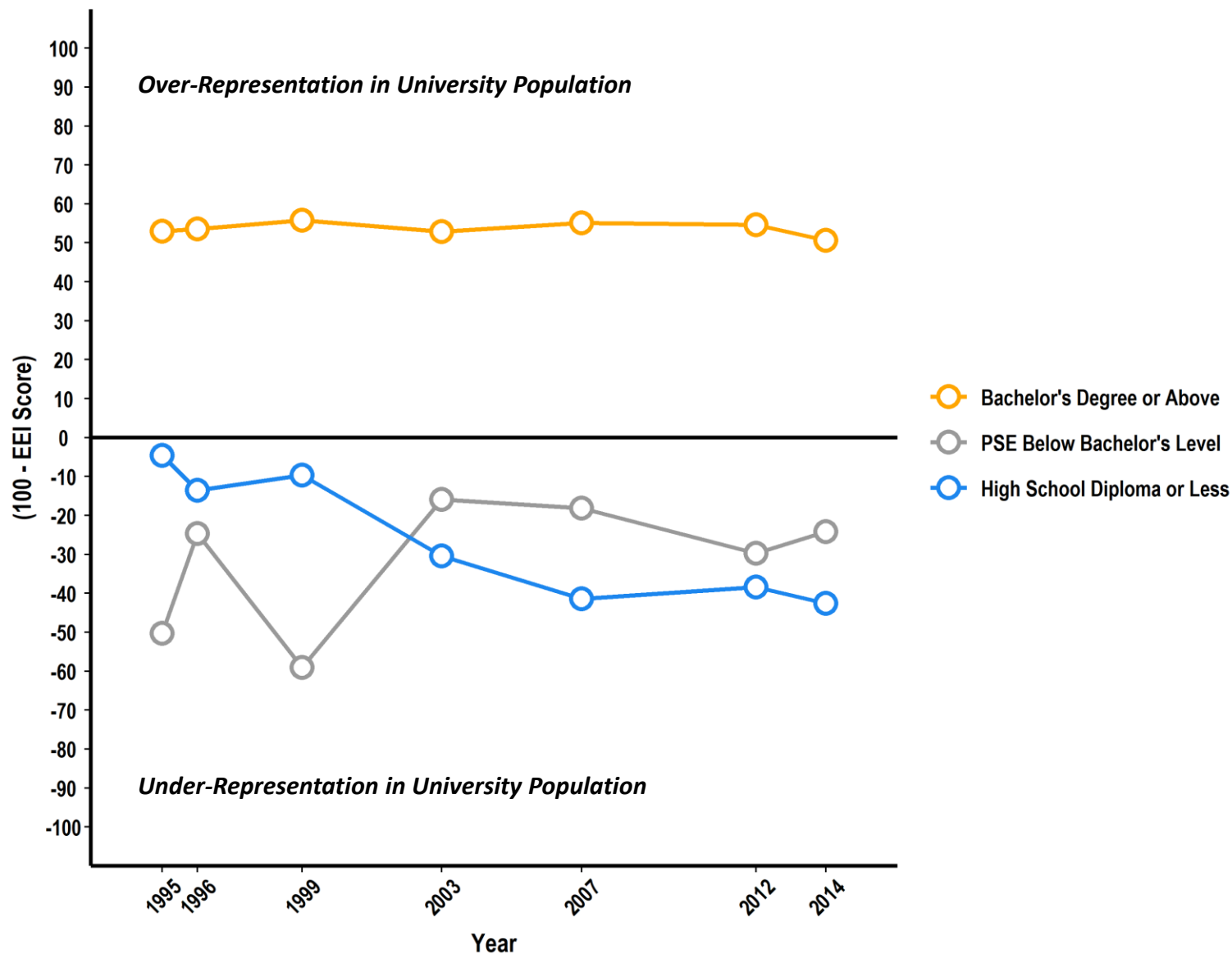


Twenty-Year Trend in EEI for Maritimers





Twenty-Year Trend in EEI for Maritimers





Follow-up Question

What are possible explanations of the observed under-representation of *graduates* whose parents hold a **High School diploma (or less) level of education?**



Data Sources

- MPHEC High School Survey (*conducted in Spring, 2014*)
- Maritime Provinces' Institutions' Tuition Fees
- MPHEC Postsecondary Student Information System (PSIS)
- Statistics Canada
 - 2001, 2006, and 2016 Census
 - Employment and Unemployment Rates (*Table 14-10-0020-01*)
 - College Participation (*Tables 37-10-0018-01 and 17-10-0005-01*)

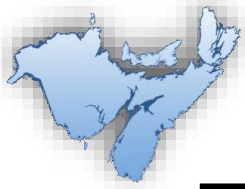


Summary of Follow-Up Analysis

- PEA has an effect on students' plans for PSE
- Finances are a primary concern for students.
- Rather than attending university, individuals may be:
 - Opting to enter the workforce
 - Going to College.

High School Survey

What did graduating students tell us about going to PSE?



Details of High School Survey

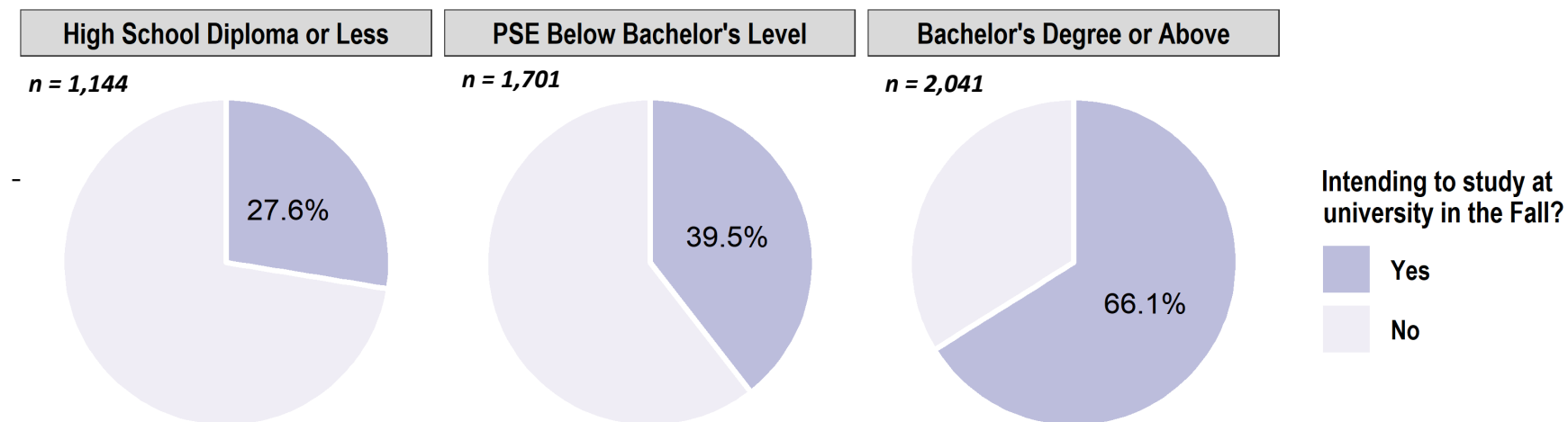
- Survey designed in collaboration with departments of Education in the three Maritime provinces.
- Data collected in the Spring of 2014
- Total sample: **5,219**
 - 4,886 reported educational attainment for at least one parent/guardian
- Infographic published in September 2015:
“Why Grade 12 Students Choose University”



PEA Impacts Students' Likelihood of Studying at a University Immediately after High School

Universe: All students ($n = 4,886$).

Parents' Educational Attainment

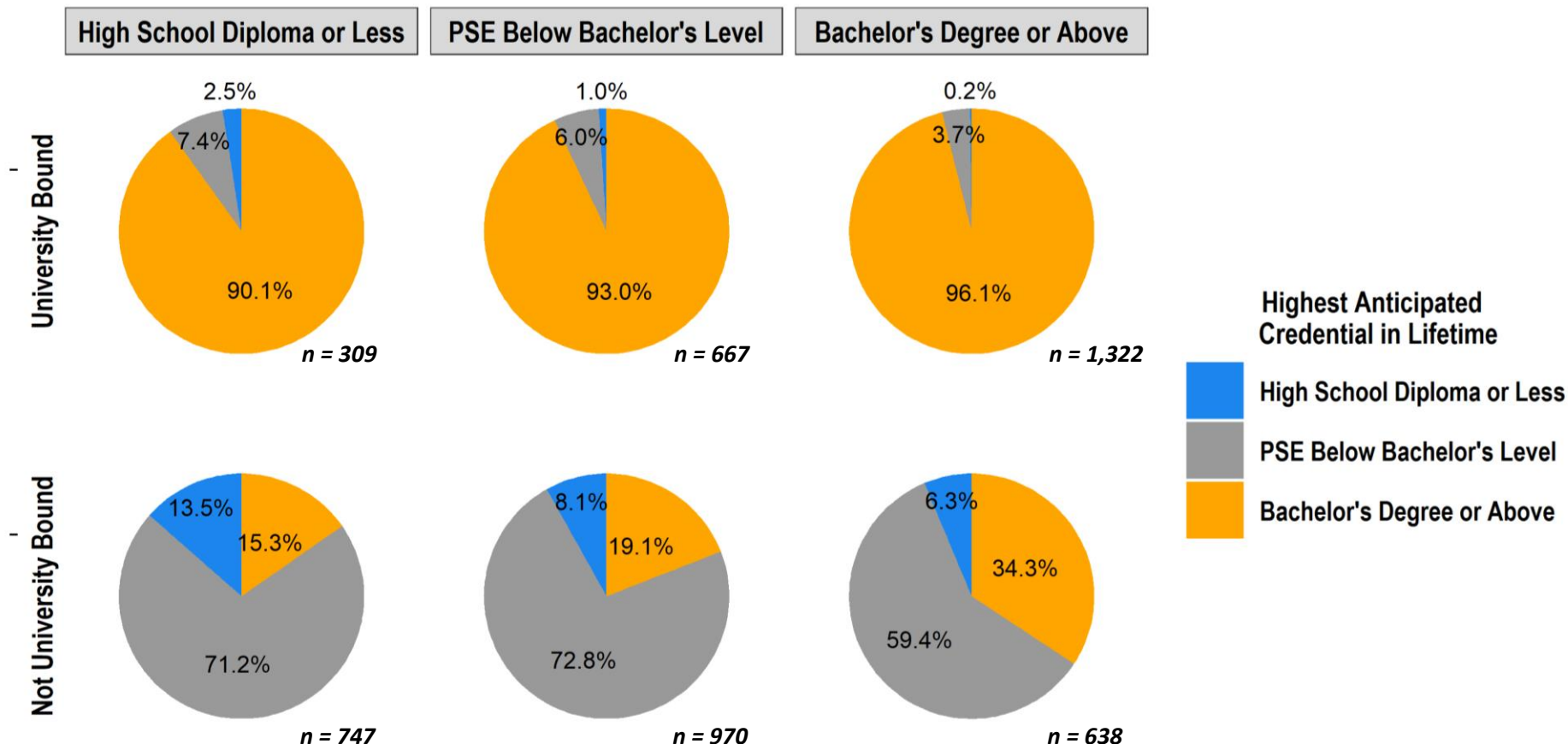




PEA Impacts Students' Level of Highest Anticipated Credentials in their Lifetime

Universe: All students who provided an anticipated credential (n = 4,653).

Parents' Educational Attainment





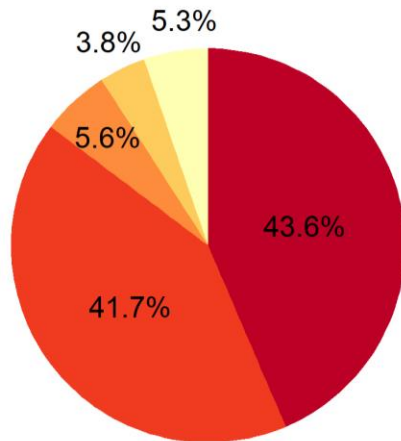
Financial Reasons are Students' Most-Cited “Most-Important Reason” for why they are Not PSE-Bound.

Universe: All not PSE-bound students who provided a most-important reason (n = 848).

Parents' Educational Attainment

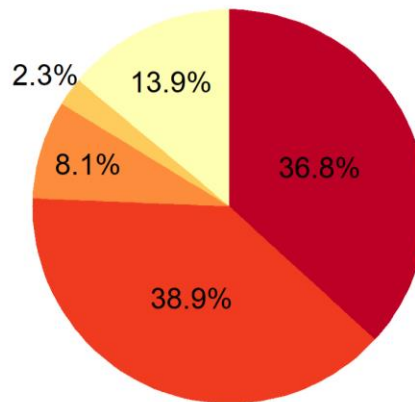
High School Diploma or Less

n = 310



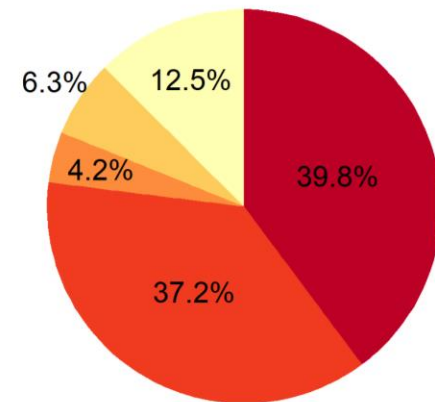
PSE Below Bachelor's Level

n = 330



Bachelor's Degree or Above

n = 208



Respondents' Most Important Reason for Not Attending PSE

Financial

Want a Break

Academic Performance

Lack Knowledge of Options

Other



Summary of Data from High School Survey

- PEA has an effect on students' plans for PSE.
- Finances are a primary concern for non-PSE bound students.
- Taking a break from school is an important reason for students to not be going to PSE.
- College-level education is seen by non-University bound students as their most likely outcome.



Summary of Data from High School Survey

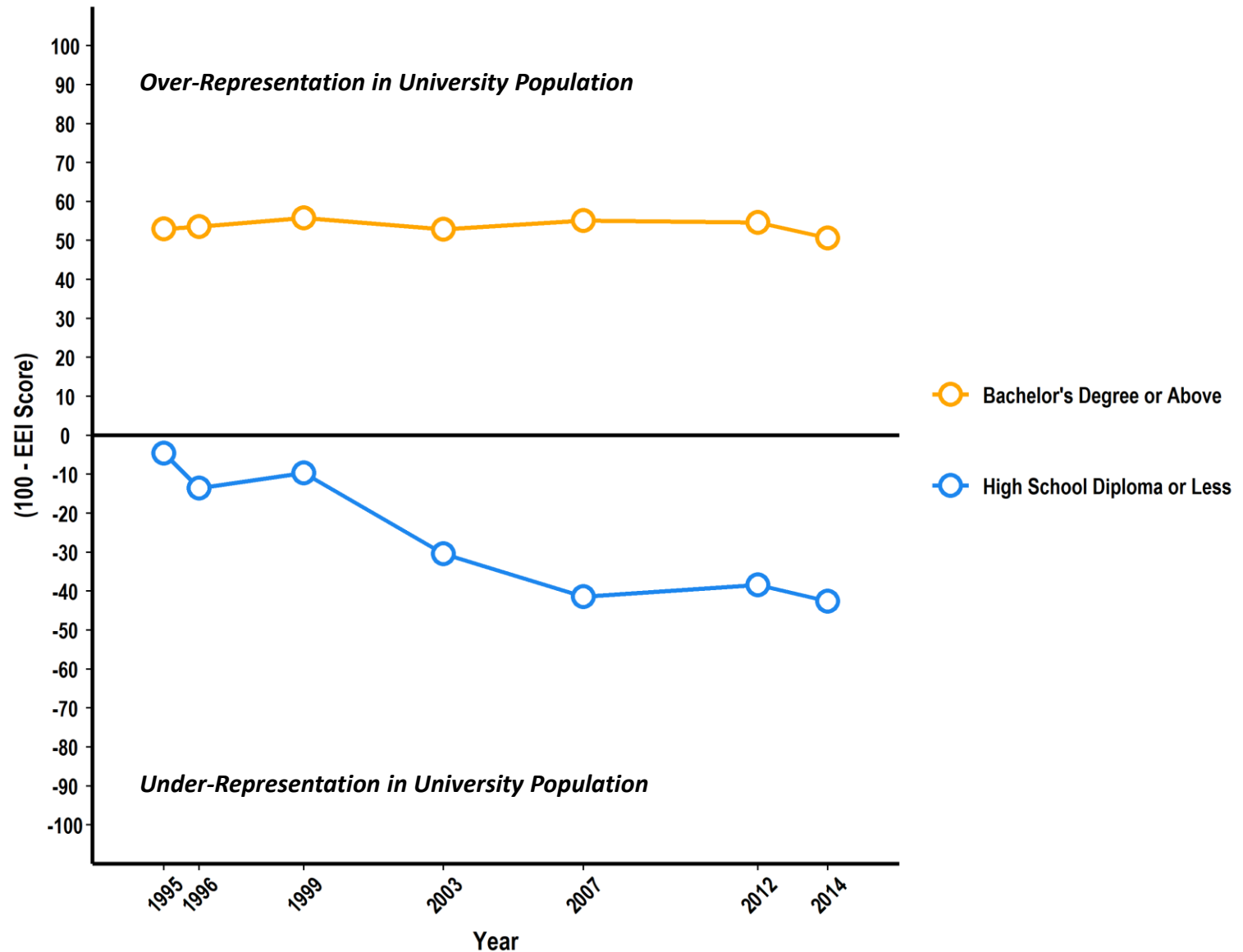
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Finances: Rising Tuition

How much does it cost to attend university?

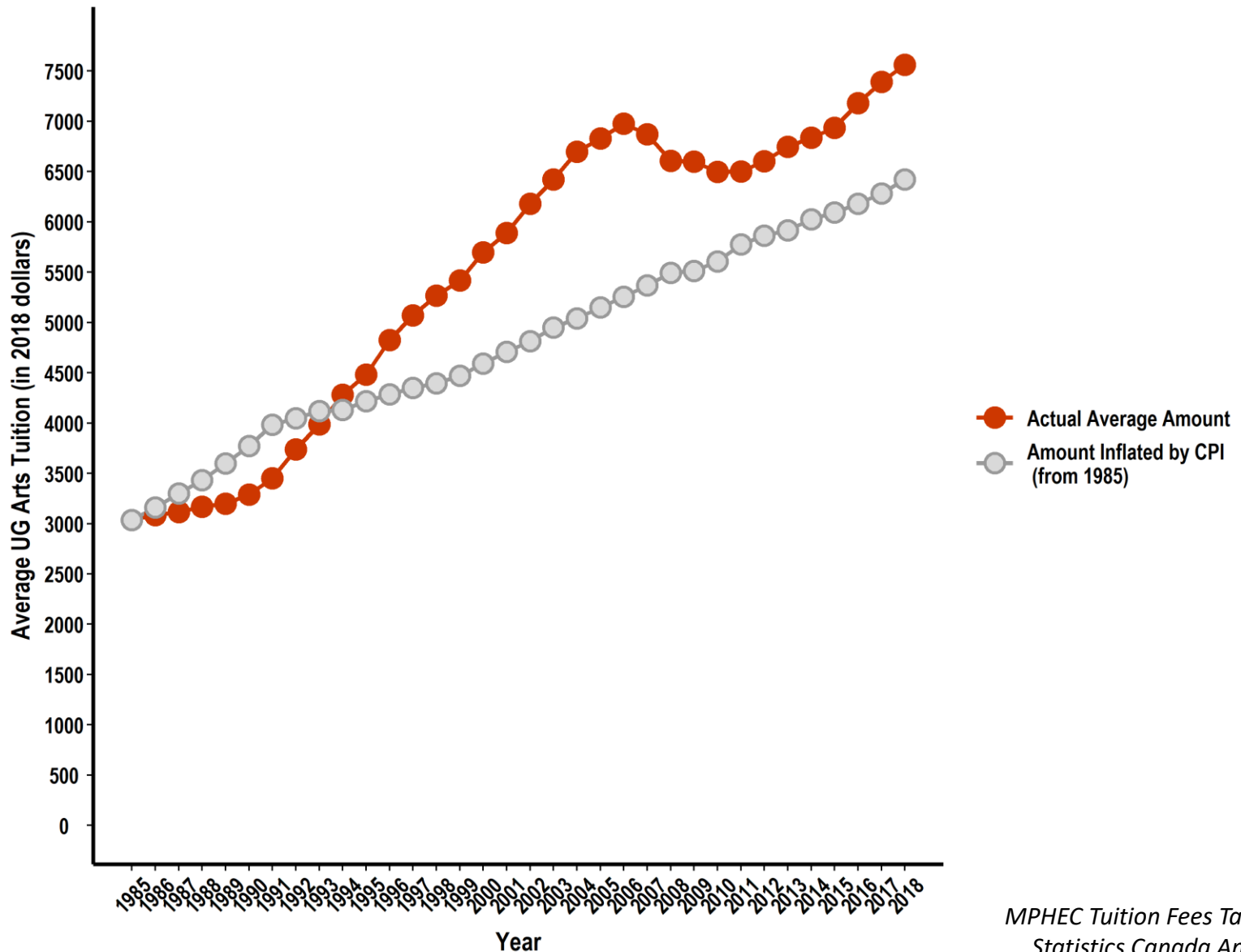


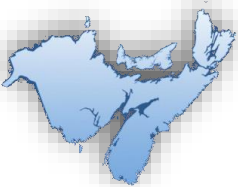
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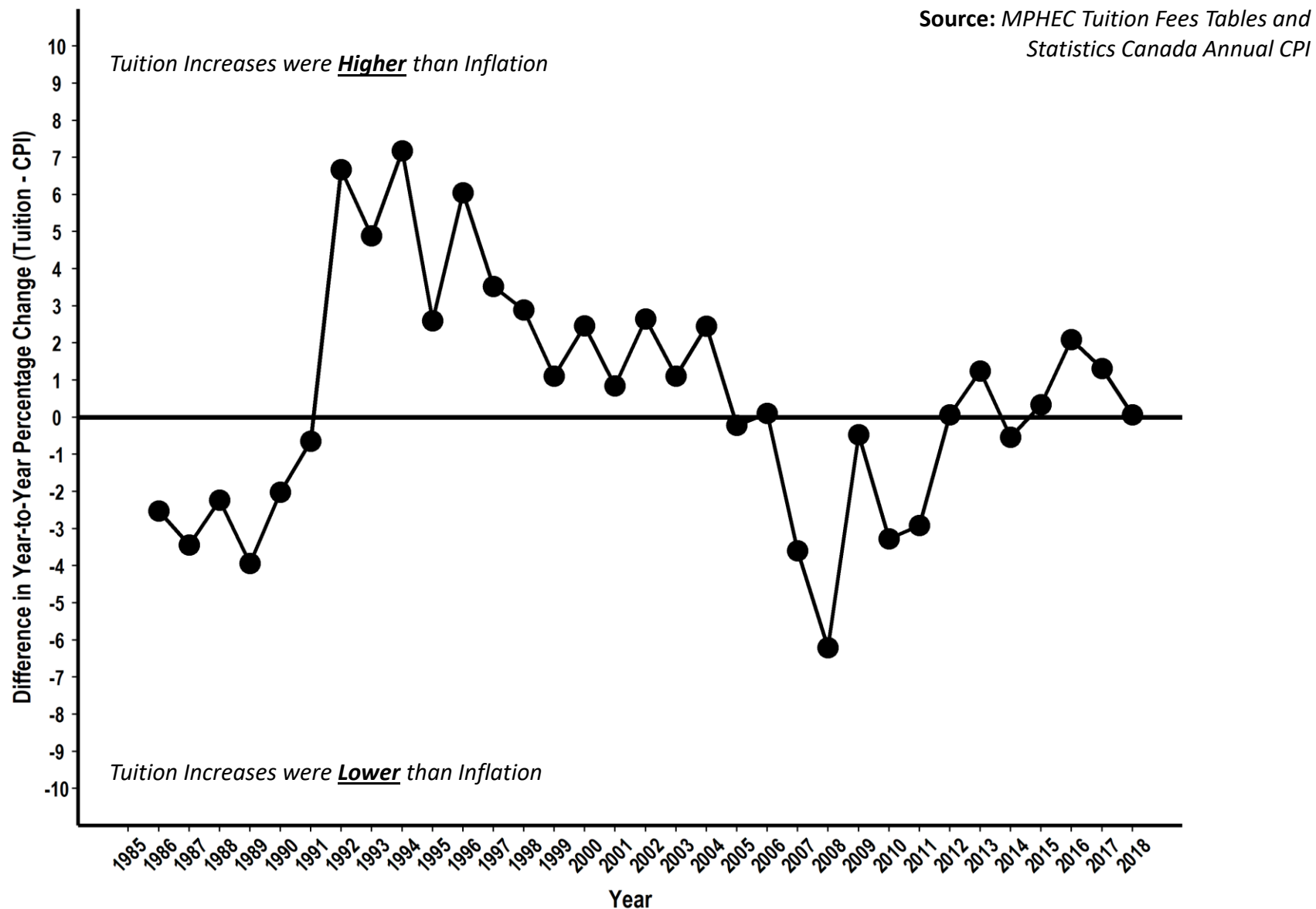


Tuition Fees at Maritime Universities Have Steadily Increased



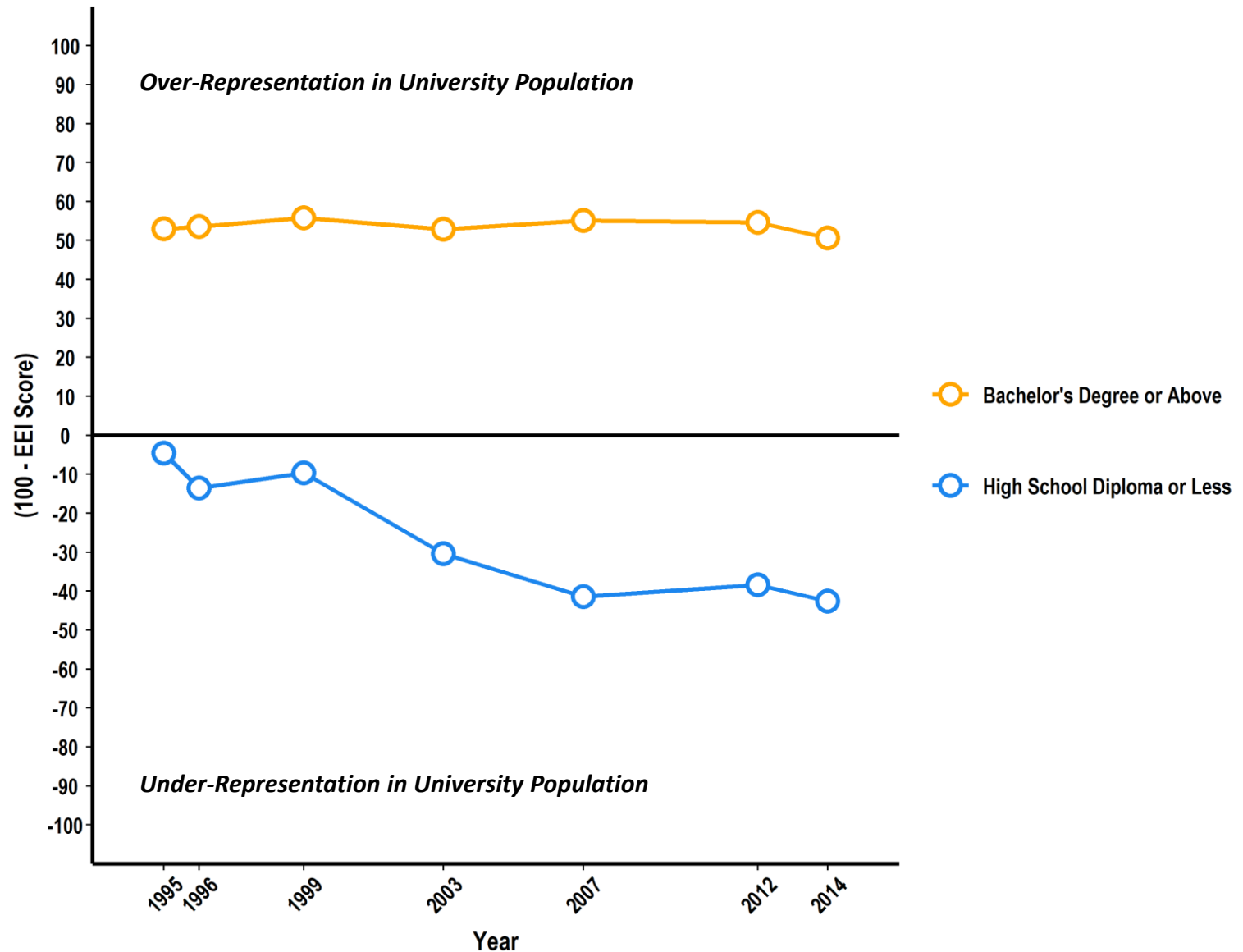


Tuition Increases were Consistently Higher than Inflation between 1992 and 2004





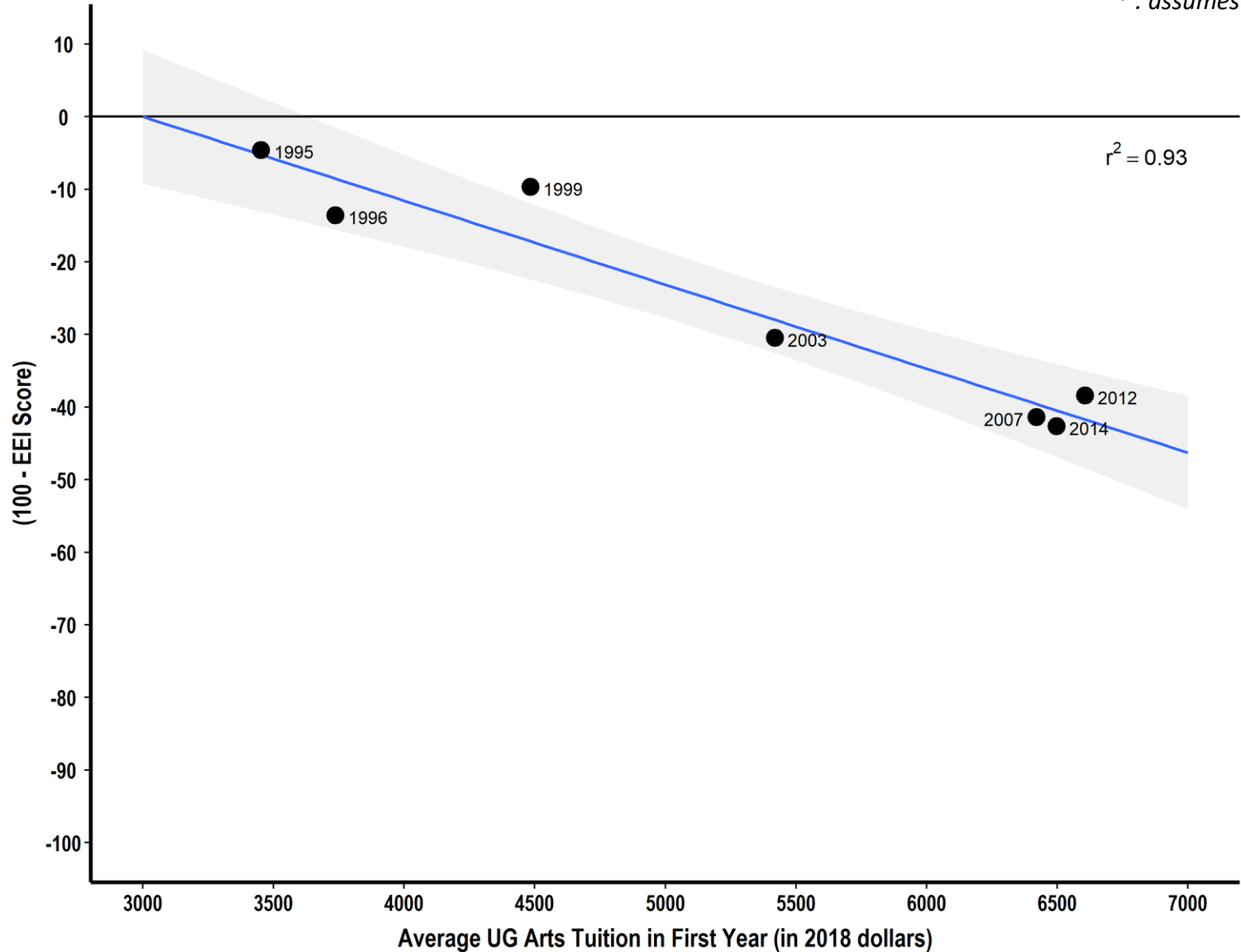
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EEI Score for PEA: **High School Diploma or Less** Correlates Strongly with First Year* Tuition Fees

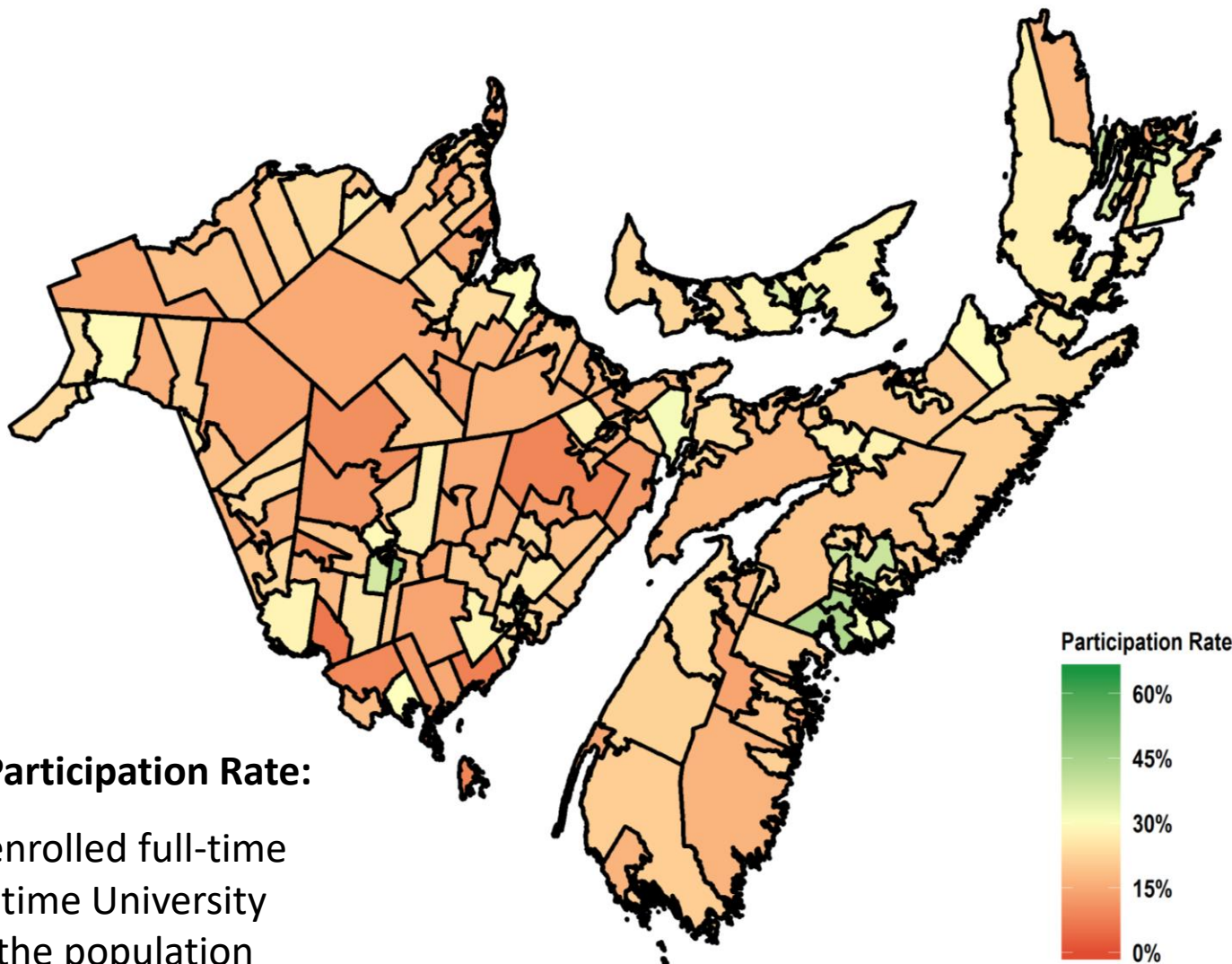
* : assumes a 4-year degree





Participation in University Varies within the Region

Source: MPHEC PSIS
and 2016 Census



Maritime Participation Rate:

Residents enrolled full-time
in any Maritime University
divided by the population
aged 18-24.

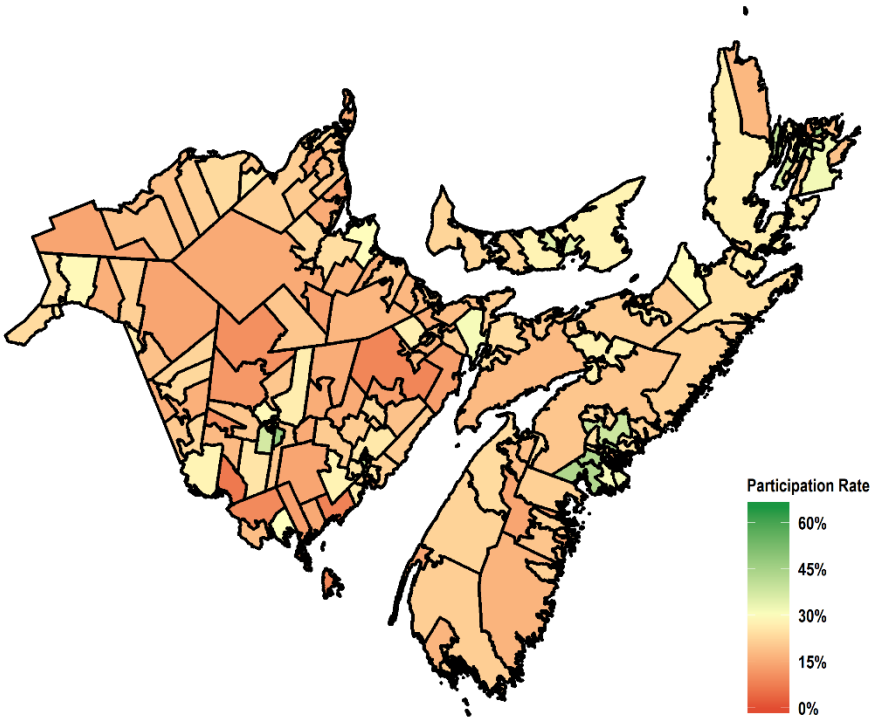


Participation in University Correlates with Household Income

Source: MPHEC PSIS
and 2016 Census

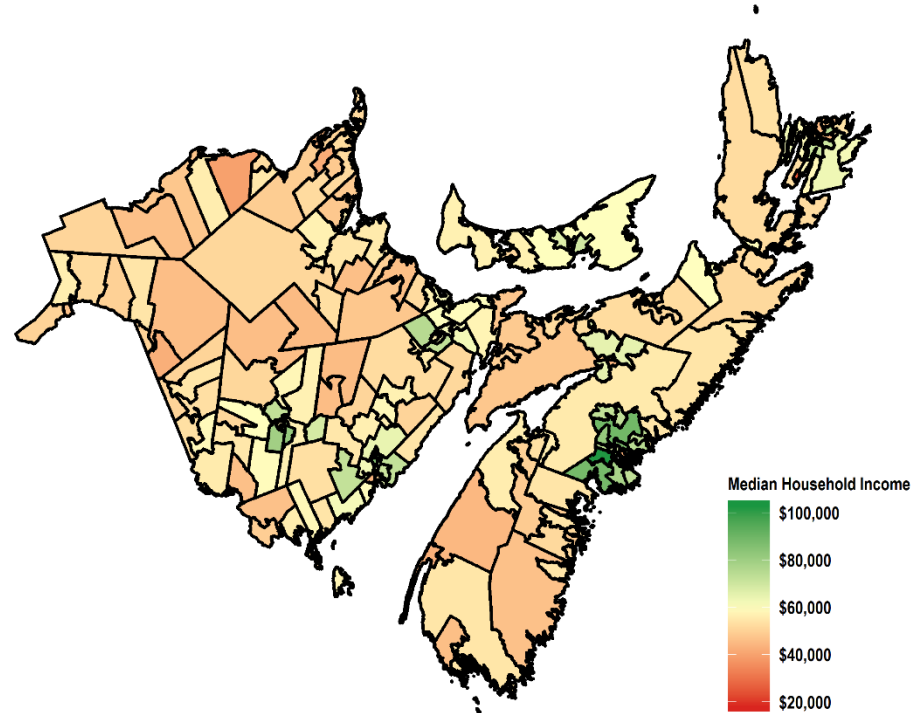
Maritime Participation Rate 2016

*Number of residents enrolled full-time in any Maritime university
divided by population aged 18-24*



Median After-Tax Income of Households (in 2019 \$)

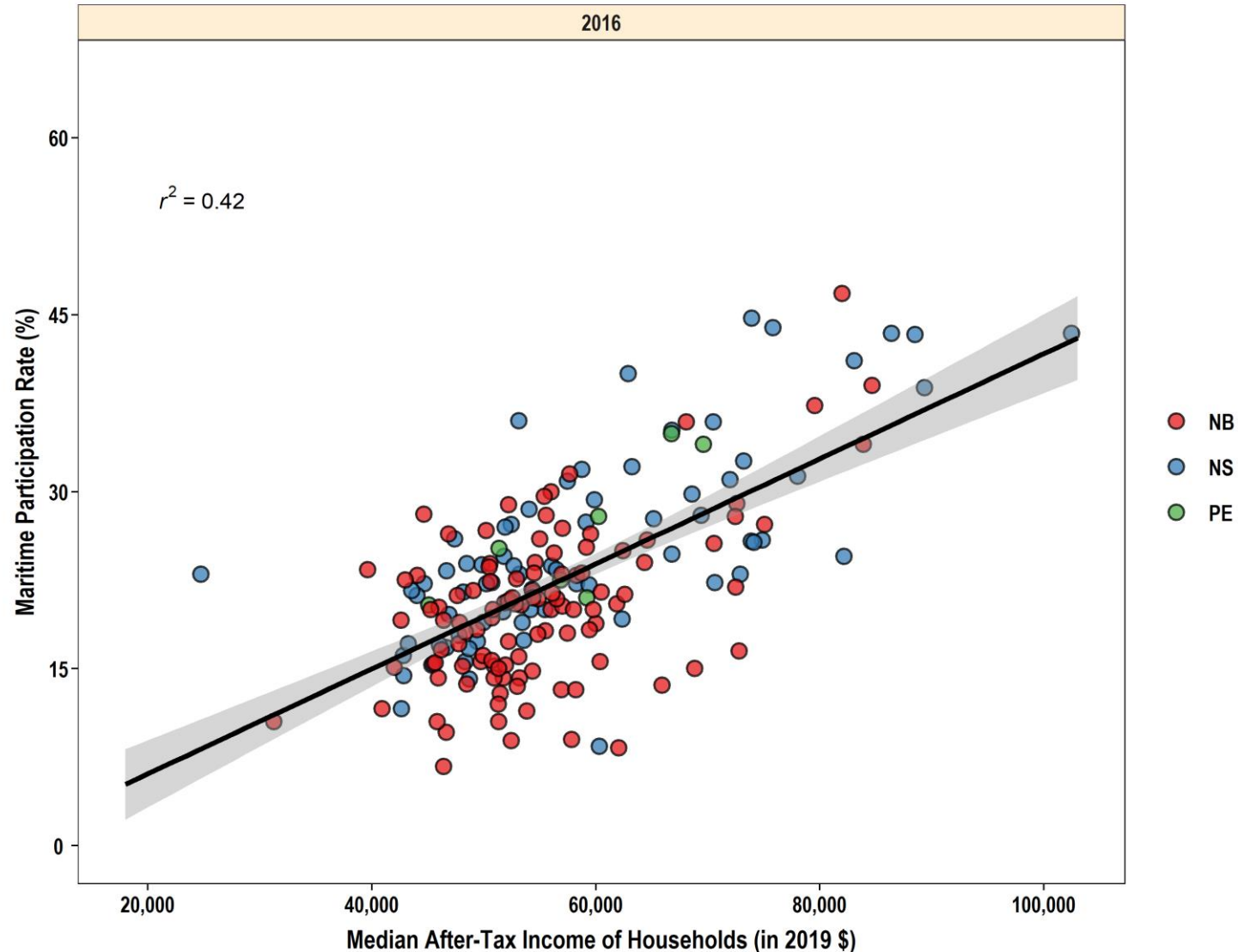
as reported in the 2016 Census





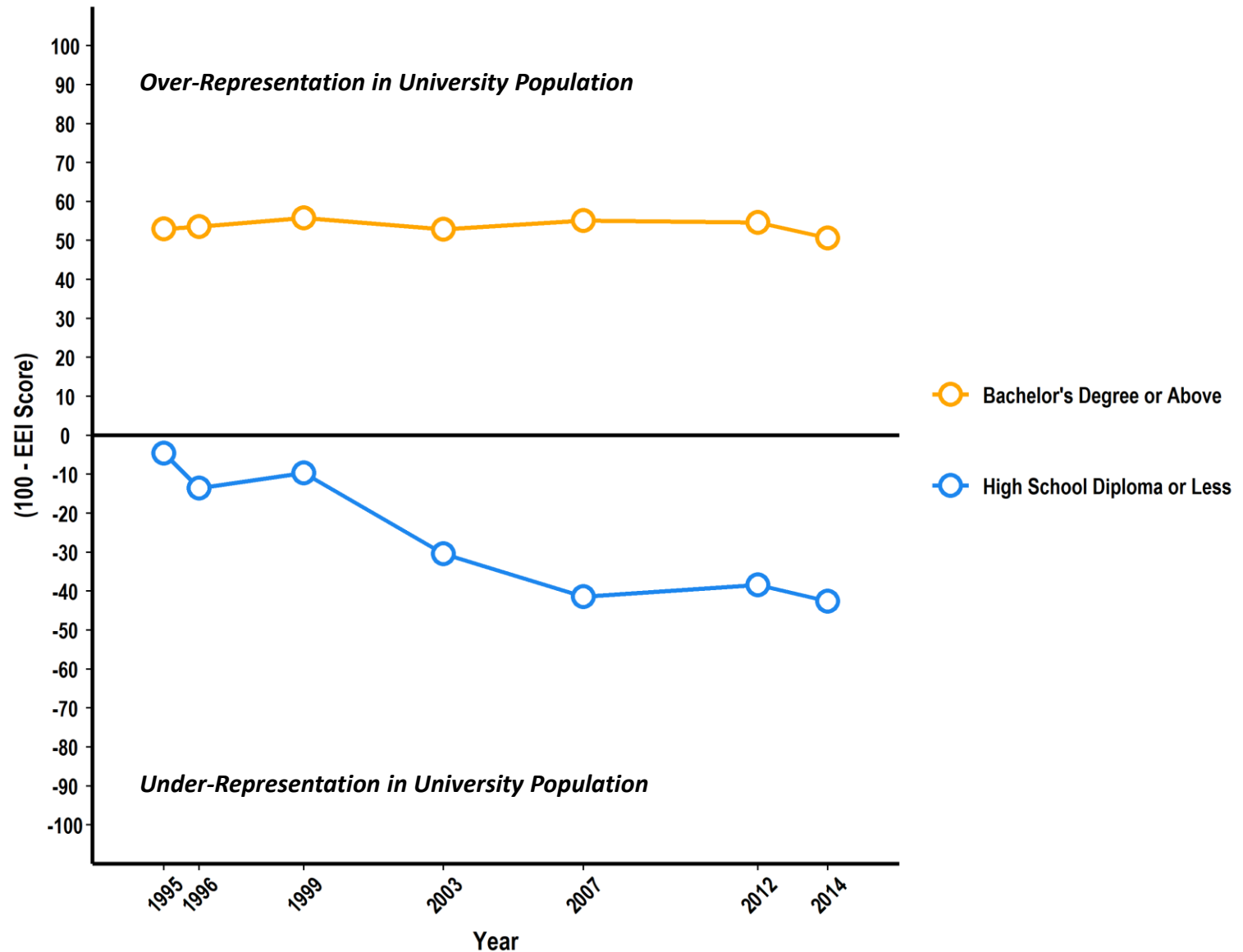
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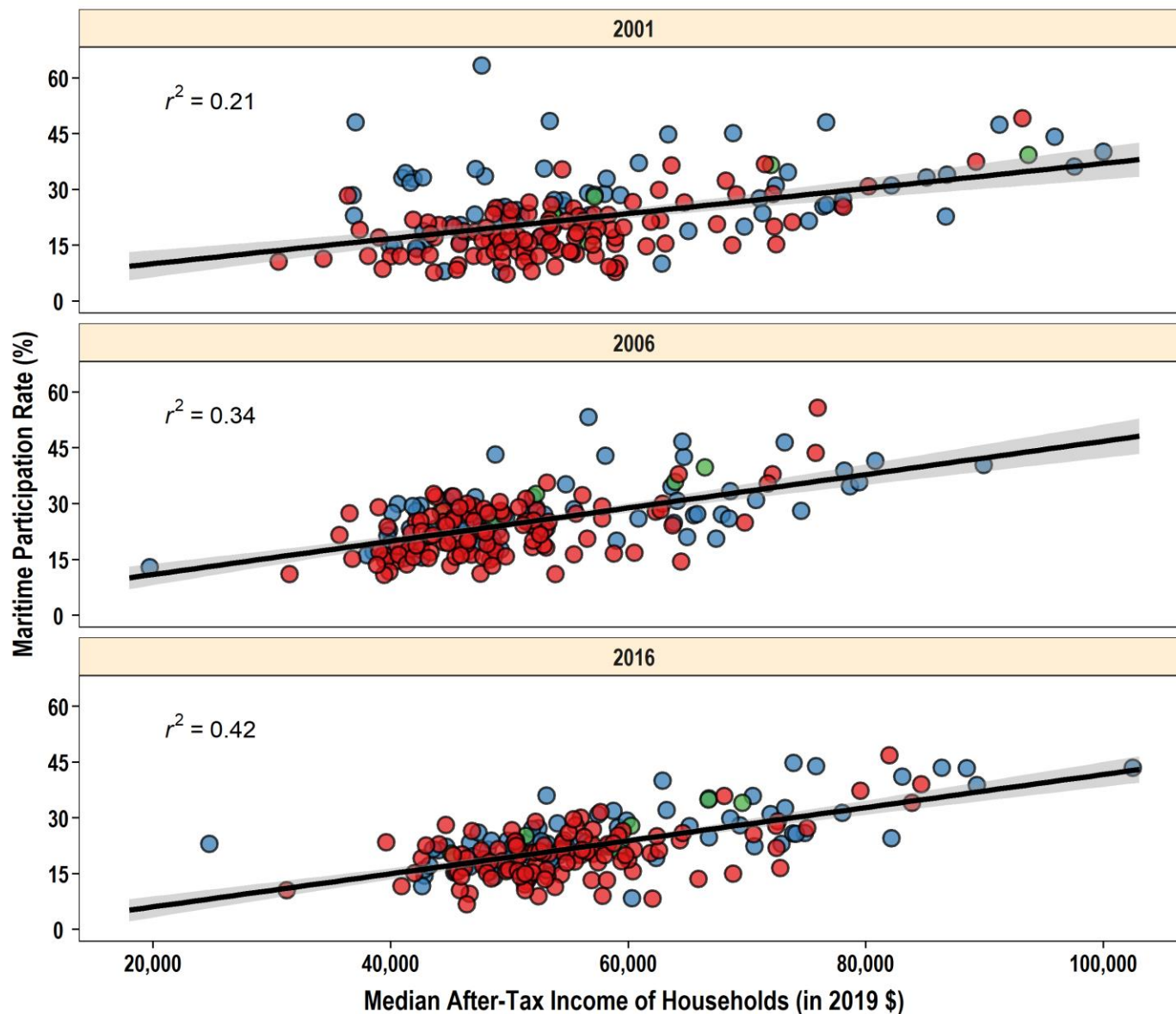
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Participation in University Correlates with Household Income, Relationship has Changed Over Time

Source: MPHEC PSIS
and 2001, 2006, and
2016 Census





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- PEA has an effect on students' plans for PSE.
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Considering Non-University Options

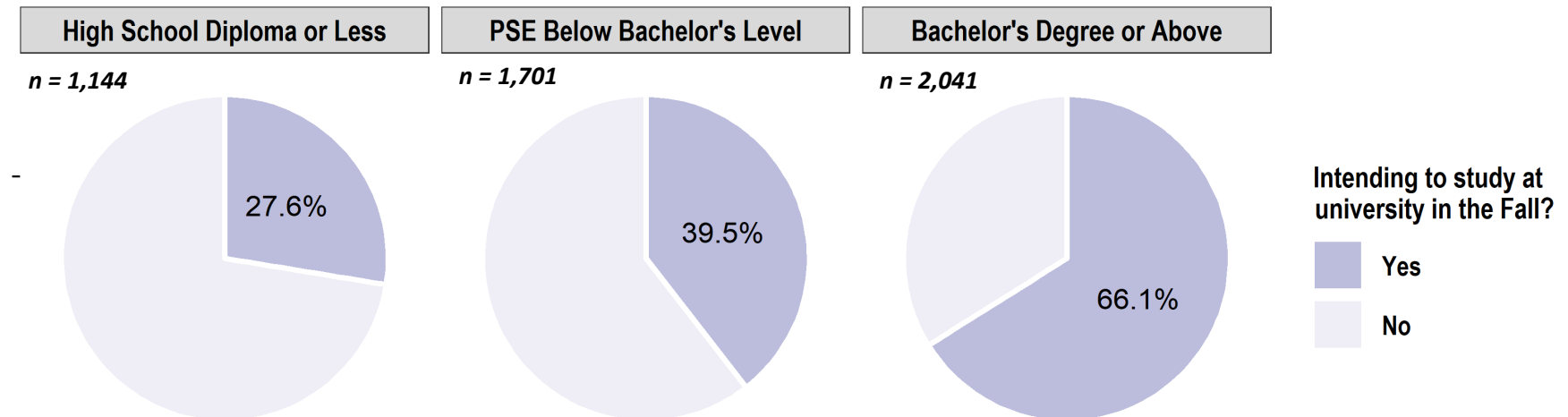
Entering the workforce and/or going to College



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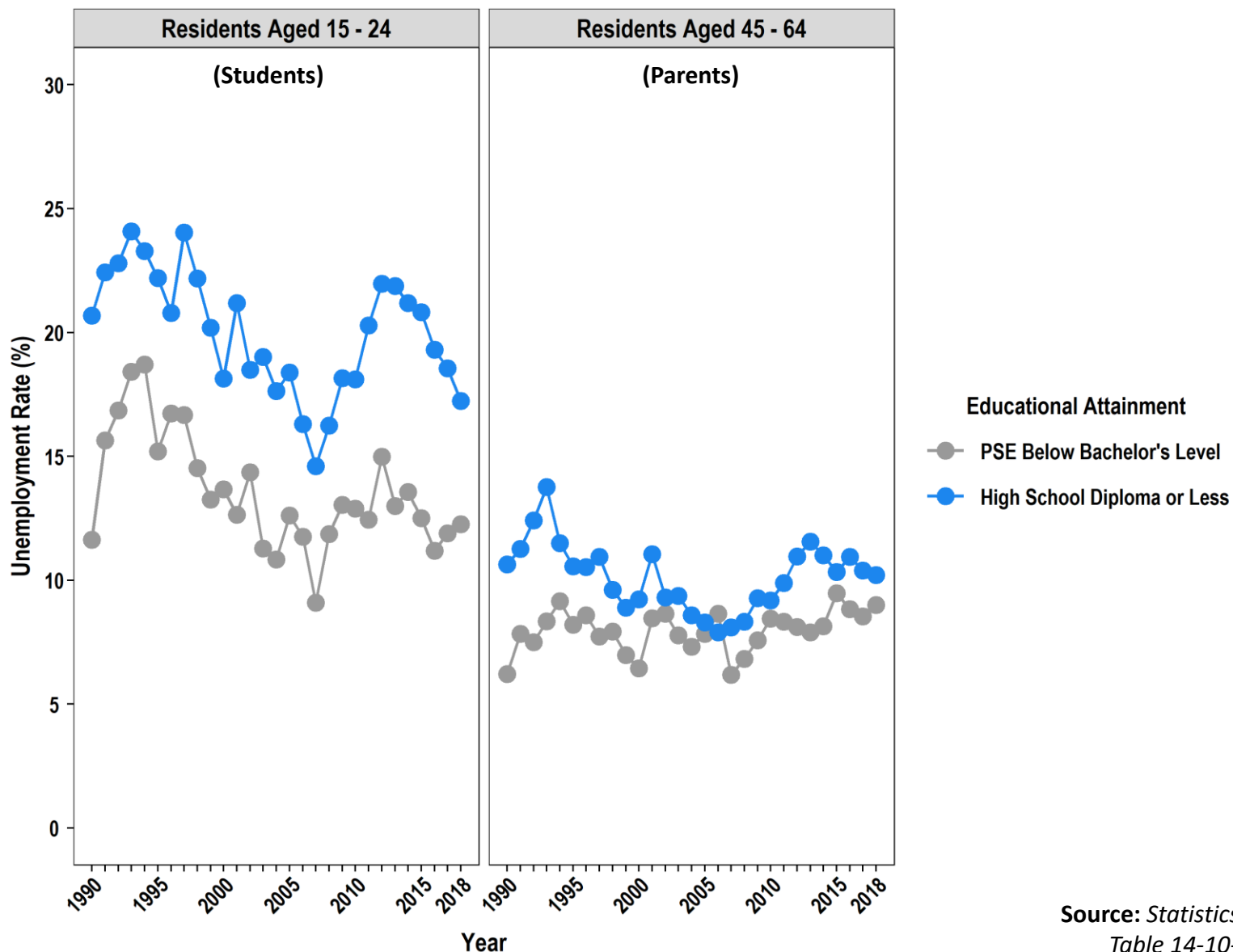
Universe: All students ($n = 4,886$).

Parents' Educational Attainment





Unemployment Rate Decreased for Student-aged (15-24) and Parent-aged (45-64) Individuals with a High School Diploma or Less.

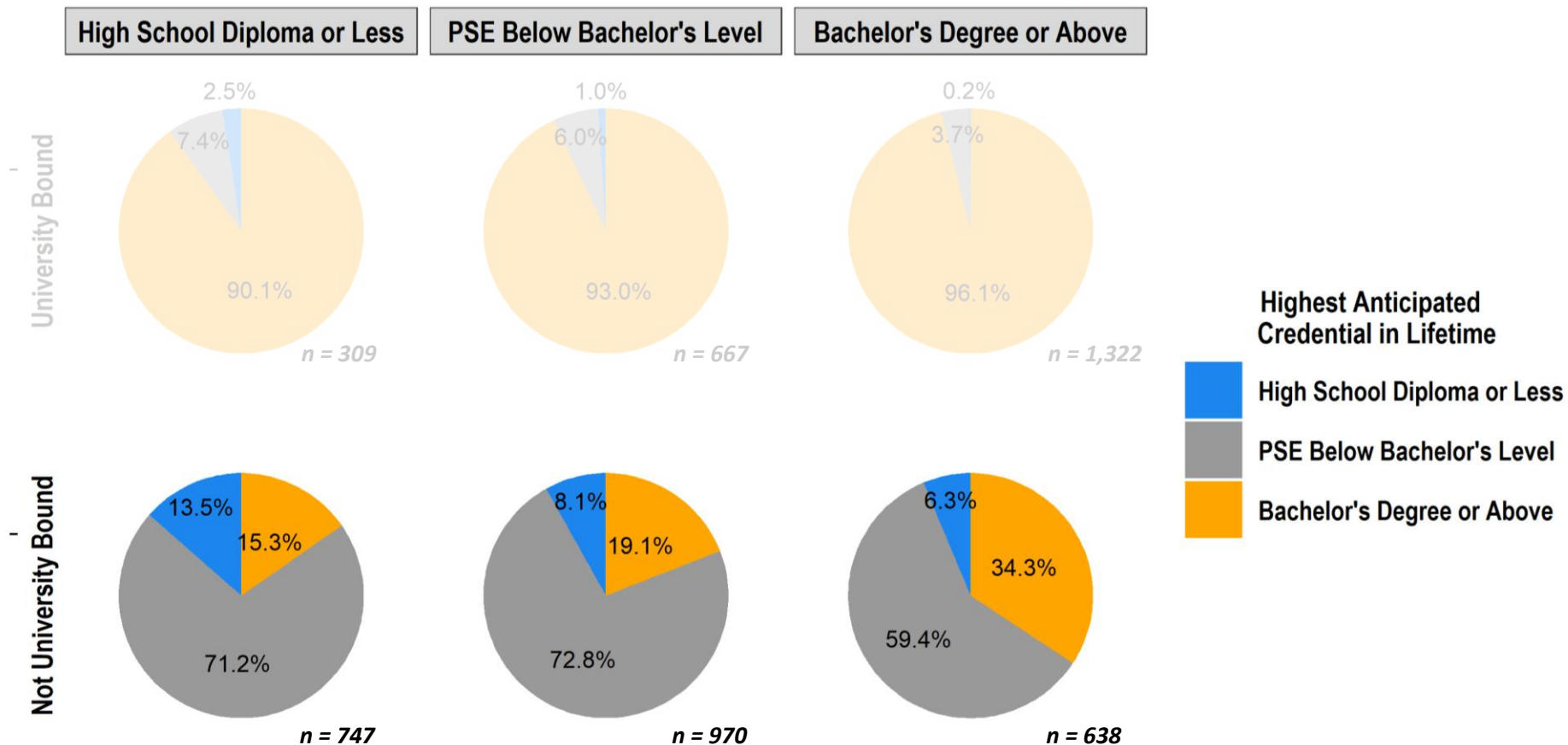




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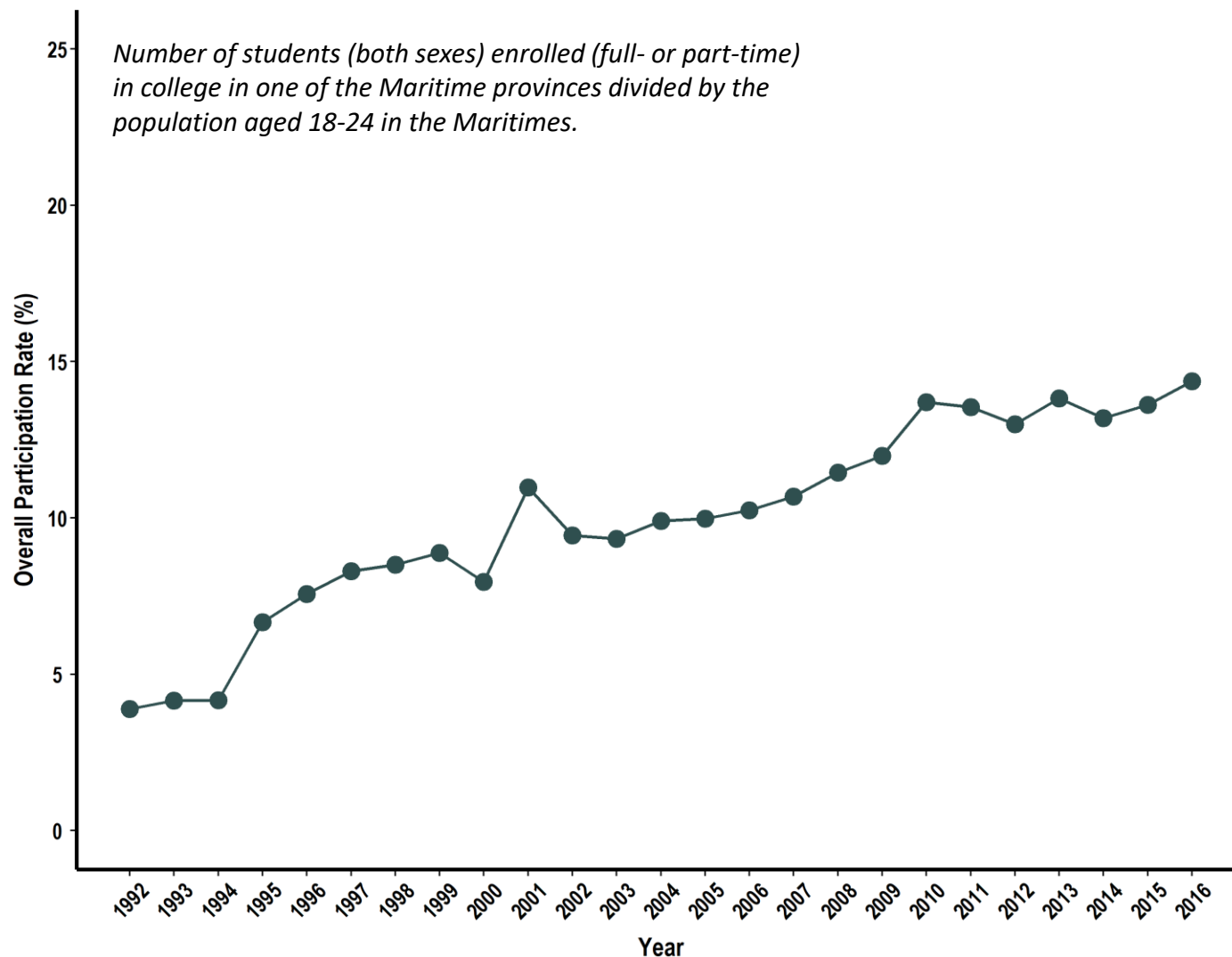
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Parents' Educational Attainment





College Participation Rate has Increased Steadily Since 1992 in the Maritimes.



Source: Statistics Canada Tables
37-10-0018-01 and 17-10-0005-01

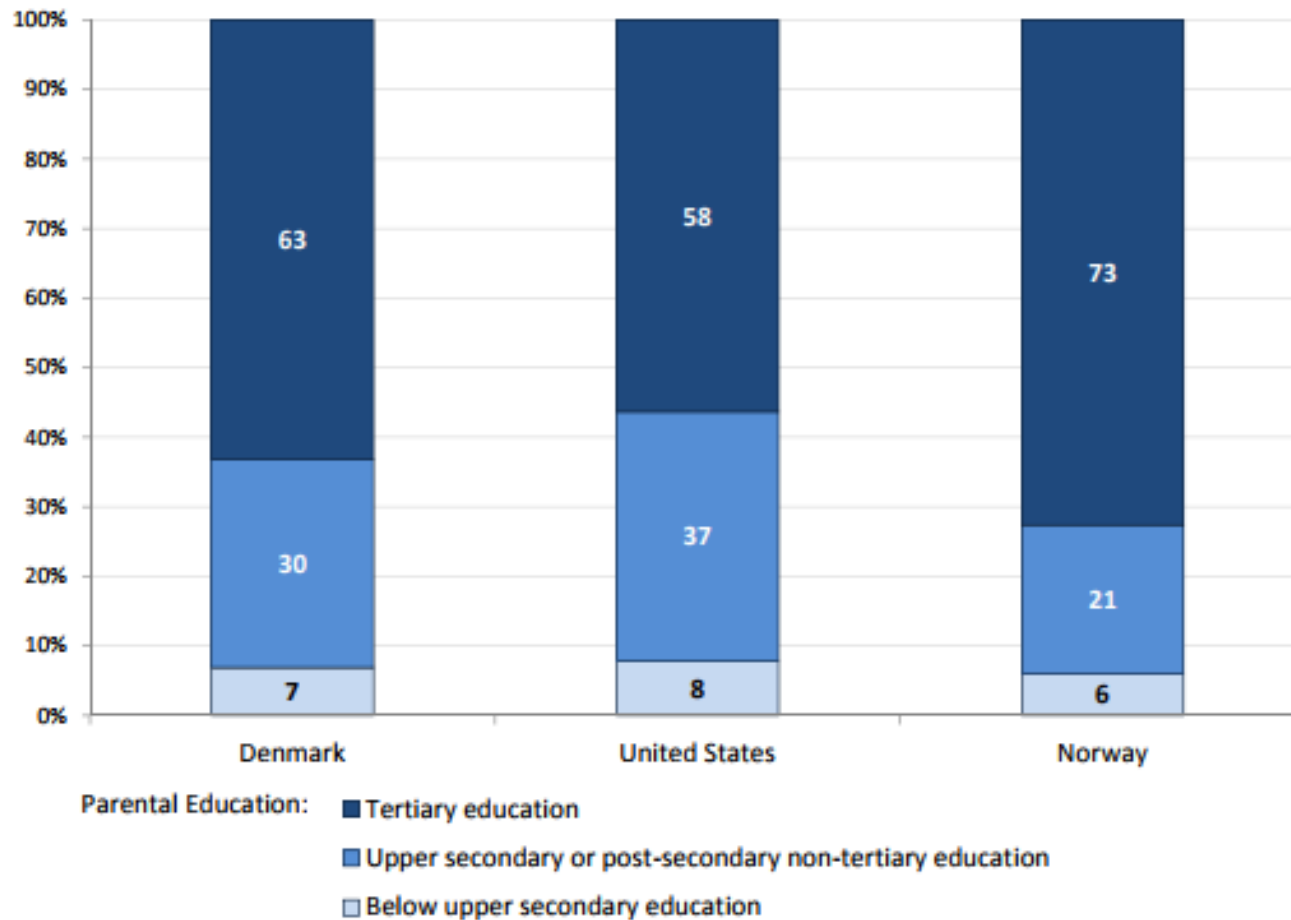


Putting it all together

- Higher education in the Maritime region is stratified.
- PEA affects students' plans for PSE.
- Finances are a primary concern for students and rising costs correlate with participation rates.
- Perhaps due to costs of university, students opted for non-university alternatives.

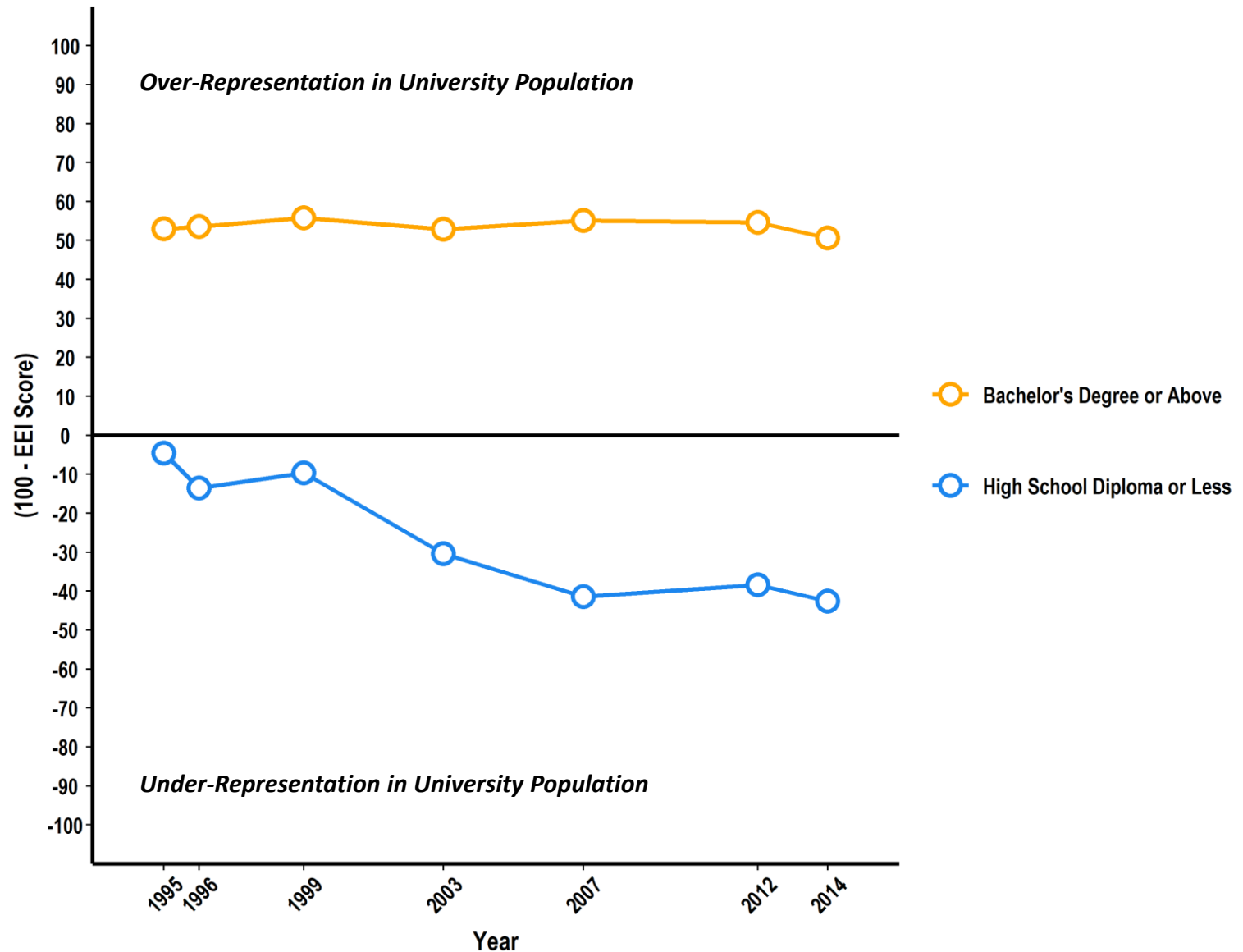


And yet... it is unlikely *all* about costs.





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