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Trends in student debt of postsecondary graduates in Canada: Results from the National Graduates Survey, 2018

by Diane Galarneau and Laura Gibson

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Trends in student debt of postsecondary graduates in Canada: Results from the National Graduates Survey, 2018

by Diane Galarneau and Laura Gibson

Overview of the study

Using data from the last four cycles of the National Graduates Survey (NGS), this study examines changes in the proportion of students with student debt over time, as well as the median amount of debt at graduation. Also, focussing on the 2015 cohort of graduates, the study examines the debt by field of study and by sources of financing, as well as the link between the characteristics of the students with student debt at graduation and the reduction of their debt three years after.

- Approximately half of graduates who graduated in 2015 reported that they had student debt when they completed their program. This proportion was lower among graduates with a doctorate degree (36%) and higher among graduates with a professional degree (i.e., bachelor's degree or university certificate or diploma above a bachelor's degree in law, medicine, dentistry, veterinary medicine, optometry or pharmacy) (85%).
- The proportion of graduates with student debt varied little between 2000 and 2015, and the median amount of student debt at graduation also remained relatively stable in real terms during this period. College graduates had the lowest amount (\$11,500 in 2015) of median student debt and professional graduates the highest (\$60,300 in 2015).
- Three in four students who graduated with student debt in 2015 had loans from only one source. Among those who graduated with student debt in 2015, most (74%) reported that they had government-sponsored student loans.
- Overall, 64% of the graduates in 2015 who graduated with student debt still had an outstanding debt after three years. This proportion was similar across levels of study.
- Having a smaller debt size at graduation, having a higher employment income, living in Ontario and being in a couple with no children was associated with faster student debt repayment. Factors associated with slower debt repayment included having a large amount of student debt at graduation, living in the Atlantic provinces or in Quebec, graduating at an older age, and having a disability.

Introduction

Earning a postsecondary qualification brings many advantages to young Canadian graduates entering the labour market, and ensures a good return for each dollar spent on education.¹ For example, postsecondary graduates often have access to higher-paying jobs, and are better protected from unemployment and underemployment.²

Despite these advantages, student debt is a financial obligation for many graduates and, depending on the size of the debt, it may delay certain important life transitions, such as starting a family, building investments or purchasing a home.³

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Student debt has remained an important issue for postsecondary students during the COVID-19 pandemic as many students lost their jobs because of the pandemic.⁴ Statistics Canada conducted an online crowdsourcing survey and, according to the data collected,⁵ more than two-thirds of the participants reported being worried that they would use up their savings (68%), would have trouble paying for their current expenses or for next year's tuition (51%), or would have to acquire additional student debt (54%).

Although no information has been collected yet on the evolution of student debt before and after the pandemic, the National Graduates Survey (NGS) has long collected information on the proportion of postsecondary students with debt (See [Data sources, methods and definitions](#)).

In this study, data from the last four cycles of the NGS are used to examine changes in the proportion of students with debt over time, and in the median amount of student debt at graduation. Additionally, using the most recent (2018) NGS cycle (based on a cohort of students who graduated in 2015), this study examines differences in student debt by field of study, and examines the sources of funding used by students (government-sponsored student loans, bank loans or lines of credit, or loans from family or friends). Finally, this study examines the characteristics of graduates who were most likely to have repaid their debt in full after three years.

One in two postsecondary graduates had student debt at graduation

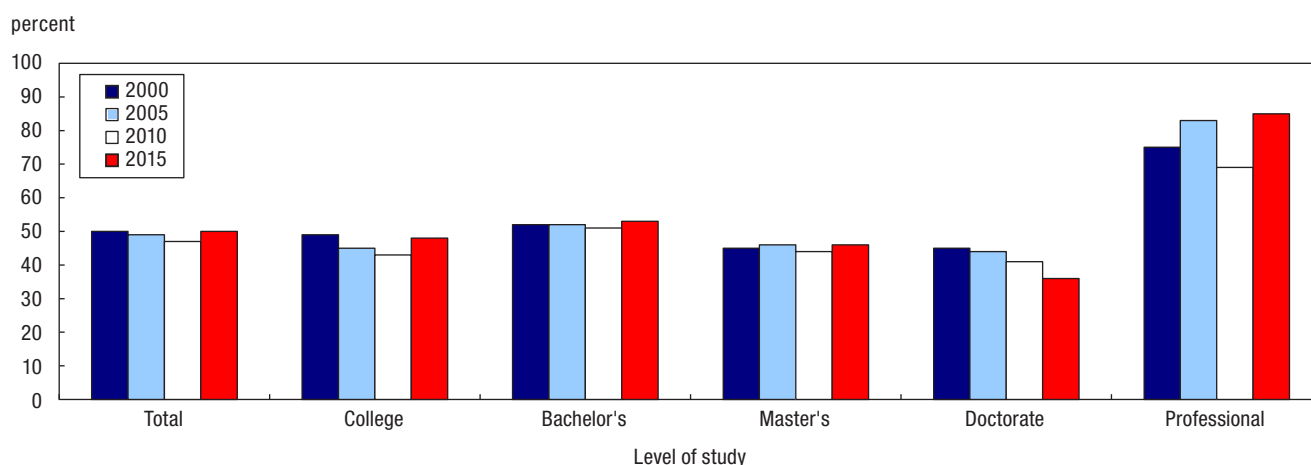
Overall, the proportion of postsecondary graduates with student debt at graduation remained relatively stable between 2000 and

2015, with approximately half of postsecondary graduates having accumulated student debt at the time of completing their program of study (Chart 1).

When level of study is examined, this proportion was relatively stable over the 15-year period for college graduates (between 43% and 49%), graduates with a bachelor's degree (around 52%) and a master's degree (around 45%). Together, graduates at these levels of study represented more than 95% of postsecondary graduates in each cohort. Doctorate (1.5%) and professional graduates (3.5%) accounted for the remaining 5%.

Even though graduates with a doctorate degree spend many years at school, they were among the least likely to have student debt at graduation. The proportion of doctorate degree holders with student debt also decreased steadily between 2000 and 2015, from 45% of those who graduated in 2000 to

Chart 1
Percentage of graduates with student debt at graduation, by level of study, classes of 2000 to 2015^{1,2}



1. For the classes of 2000 and 2005, the interview took place two years after graduation, and for the classes of 2010 and 2015, the interview took place three years after graduation.

2. Statistical testing between cycles is not possible because of differing methods of variance estimation over time.

Note: Estimates exclude graduates who pursued further postsecondary education by the time of interview.

Source: Statistics Canada, National Graduates Survey, classes of 2000 to 2015.

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36% of those who graduated in 2015. This relatively low proportion of graduates with student debt may be linked to the fact that many doctorate students receive funding through scholarships, fellowships, awards or prizes, or work as research or teaching assistants.⁶ The NGS data show that 83% of 2015 graduates with a doctorate degree reported that they funded their studies in part using scholarships or prizes, and 75% had a research or teaching assistantship.⁷ Furthermore, among graduates who reported the use of multiple sources of funding, doctorate graduates were the least likely to report employment earnings or savings as their main source of funding in 2015 (29%, compared to 50% and over among master's, bachelor's and college graduates).

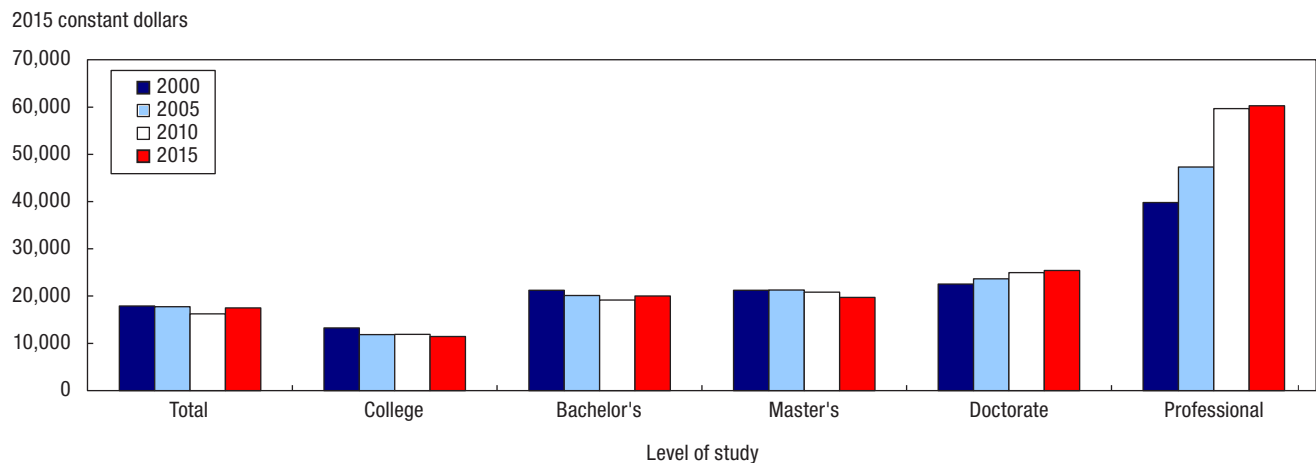
By contrast, most graduates with a professional degree (i.e., bachelor's degree or university certificate or

diploma above a bachelor's degree in law, medicine, dentistry, veterinary medicine, optometry or pharmacy) graduate with student debt, and that proportion has increased—from 75% in 2000 to a high of 85% in 2015. The high prevalence of student debt among professional degree holders is related to the high costs of these programs. In the 2014/2015 academic year, tuition fees for Canadian students in professional programs were the highest of all undergraduate programs in Canada: \$18,118 for dentistry, \$12,987 for medicine, \$11,273 for pharmacy and \$10,563 for law, compared with \$5,998 for the total of all fields of study.⁸ However, other costs—such as the cost of instruments or travel costs for medical electives—may also drive up student debt for professional degree holders.

Median debt remained stable between 2000 and 2015 for most levels of study

This section examines the amount of debt incurred by postsecondary graduates in each of the four NGS cycles, expressed in 2015 constant dollars. Graduates who did not have student debt at graduation were excluded from these estimates. From 2000 to 2015, the median student debt at graduation⁹ remained relatively stable in real terms¹⁰ for the majority of graduates (Chart 2). Students who graduated in 2015 had a median debt of \$17,500 at graduation, which was comparable to the level of debt reported by those who graduated in 2000 (\$17,900). This suggests that debt size has stabilized, after a period of growth in the 1980s and 1990s for college graduates and graduates with bachelor's degrees.¹¹

Chart 2
Median student debt¹ at graduation, by level of study, classes of 2000 to 2015^{2,3}



1. Median debt represents the median dollar amount of student debt from all sources of loans, for graduates who did not pursue further postsecondary education by the time of interview and who reported a debt amount greater than zero at graduation.

2. For the classes of 2000 and 2005, the interview took place two years after graduation, and for the classes of 2010 and 2015, the interview took place three years after graduation.

3. Statistical testing between cycles is not possible because of differing methods of variance estimation over time.

Note: Estimates exclude graduates who pursued further postsecondary education by the time of interview. Dollar values are adjusted to 2015 constant dollars using the Consumer Price Index.

Source: Statistics Canada, National Graduates Survey, classes of 2000 to 2015.

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College graduates had the lowest median student debt (between \$11,500 and \$13,300). Bachelor's degree holders and master's degree holders had similar levels of debt (between \$19,200 and \$21,300). The median debt of doctorate

degree holders increased slightly, from \$22,600 to \$25,400 over the period. Professional degree holders, by contrast,¹² experienced a gradual increase in median student debt over the period, largely because of a 50% increase between 2000 and 2010.

Among university programs, graduates in professional programs had the highest median debt, at \$60,300 in 2015. This was three times the amount reported by graduates with a bachelor's degree (\$20,000).

Table 1
Percentage of graduates who had student debt and median debt amount at graduation, by level of study, 2015
postsecondary graduates

Field of study	Level of education											
	Total		College		Bachelor's		Master's		Doctorate		Professional	
	Debt at graduation percent	Debt amount at graduation median	Debt at graduation percent	Debt amount at graduation median	Debt at graduation percent	Debt amount at graduation median	Debt at graduation percent	Debt amount at graduation median	Debt at graduation percent	Debt amount at graduation median	Debt at graduation percent	Debt amount at graduation median
Education	48	14,749	35	9,173	58	17,870	36	9,954	29	19,059	...	...
Visual and performing arts, and communications technologies	55	17,773	56	14,289	55	23,527	47	12,307	51	21,578	...	...
Humanities	52	17,878	53	13,326	54	19,597	43	11,368	51	25,431	...	...
Social and behavioural sciences and law	52	19,715	46	13,782	51	20,651	51	19,750	50	27,689	83	58,611
Business, management and public administration	45	15,987	44	10,606	45	19,482	46	19,776	25	24,587	...	...
Physical and life sciences and technologies	53	24,132	40	26,144	63	24,528	51	20,269	31	24,957	...	...
Mathematics, computer and information sciences	43	16,779	48	14,448	41	19,021	39	16,929	28	27,823	...	...
Architecture, engineering and related technologies	49	14,767	47	11,105	58	19,620	42	19,814	26	21,995	...	...
Agriculture, natural resources and conservation	56	18,916	61	17,458	59	21,314	48	18,939	24	12,109	...	...
Health and related fields	58	19,637	54	9,965	60	26,652	54	20,700	42	30,016	88	69,122
Personal, protective and transportation services	46	9,885	47	9,821	44	12,834	27	10,792	F	F	...	...
Other	53	12,744	67	6,573	42	15,465	51	13,087	39	42,038	...	...

... not applicable

F too unreliable to be published

Note: Median debt amount is calculated for graduates who had debt at graduation only and does not include zero values for graduates who did not have debt.

Source: Statistics Canada, National Graduates Survey, 2018.

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Graduates of health and related studies programs are among the most likely to have student debt at graduation

Student debt varied greatly by level of study and field of study. Overall, graduates of health and related studies programs were the most likely to have student debt at graduation, at 58% (Table 1). These graduates also had some of the highest median amounts of student debt for their respective levels of study: \$26,700 for bachelor's degree holders, \$20,700 for master's degree holders and \$69,100 for professional degree holders.

The high prevalence of student debt and large debt among professional degree holders was not limited to graduates in health and related studies programs. Graduates with professional degrees in social and behavioural sciences and law were also among the most likely of all graduates to have student debt (83%), and had the second-highest debt (\$58,600) at graduation.

At the other end of the spectrum, college graduates of education programs were among the least likely to have student debt (35%), and their median debt was the lowest (\$9,200). College graduates of business, management and public administration programs were also among the least likely to graduate with debt (44%), and their median debt was also relatively low (\$10,600).

For bachelor's degree holders, graduates of mathematics, computer and information sciences, as well as those of business, management and public administration, were among the least likely to graduate with student debt (41% and 45%, respectively). These graduates also graduated with similar median debt (close to \$20,000).

Education was the field in which master's and doctorate degree holders were the least likely to graduate with student debt (36% and 29%, respectively). Education was also the field for which median debt was among the lowest for bachelor's, master's and doctorate degree holders (between \$10,000 and \$19,000).

Graduates depended largely on government-sponsored student loans

Three in four students had loans from only one source in 2015 (Table 2). Depending on the level of study, this proportion fluctuated between 82% for college graduates and 71% for graduates with master's and doctorate degrees. Graduates with a professional degree were the exception, with 42% having only one source of student debt.

Government-sponsored student loans were the most common type of student debt; 74%¹³ of students who graduated with debt in 2015 had this type of debt. The prevalence of government-sponsored student loans varied somewhat by level of study, from 69% for college graduates and graduates with a master's degree to 86% for graduates with a professional degree. One advantage of government-sponsored student loans is that they do not accrue interest while the student is in school.¹⁴

Other types of loans were less common among students with debt. Bank loans or lines of credit (30%)

Table 2
Source of student debt, by level of study, 2015 postsecondary graduates

	Total	College	Bachelor's	Master's	Doctorate	Professional
	percent					
Proportion of graduates with only one source of debt	75	82	74	71	71	42
Proportion of graduates by source of debt¹						
Government-sponsored student loans	74	69	80	69	73	86
Bank loans or lines of credit	30	24	28	41	42	55
Loans from family or friends	23	27	20	23	19	24
	dollars					
Median debt by source						
Government-sponsored student loans	14,992	10,963	19,980	14,942	20,735	25,596
Bank loans or lines of credit	12,806	9,821	13,796	15,655	19,185	59,994
Loans from family or friends	7,803	4,965	7,993	9,510	9,987	29,120

1. The sum of the proportions of graduates with each source of debt do not add to 100% as some graduates had debt from more than one source, and some graduates did not have debt at graduation.

Note: Median debt amount is calculated for graduates who had debt at graduation only and does not include zero values for graduates who did not have debt from that source at graduation.

Source: Statistics Canada, National Graduates Survey, 2018.

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were slightly more common than loans from family or friends (23%). These proportions varied slightly by level of study, graduates who obtained higher-level degrees being more likely to have a bank loan or line of credit (41% for master's degree holders, 42% for doctorate degree holders and 55% for professional degree holders).

Graduates owed the most on their government-sponsored student loans, at \$15,000 for all levels of study. This was followed by bank loans and lines of credit (\$12,800 overall) and loans from family or friends (\$7,800 overall). These values fluctuated by level of study, but were highest for graduates with a professional degree, whose amount owed for each of these loan sources could be up to three times higher than the amount owed by graduates in other levels of study.

Two-thirds of the class of 2015 had not fully repaid their debt by 2018

Overall, 64% of the 2015 graduates who graduated with student debt still had an outstanding debt after three years (in 2018). This proportion was similar by level of study, varying between 62% for graduates with a professional degree and 66% for college graduates (Table 3).

The median student debt at graduation for those who had not repaid their debt in 2018 was at least twice as high as for those who had repaid their debt in full in three years. Overall, the median debt at graduation for those who had not repaid their debt after three years was nearly \$22,000, compared with almost \$10,000 for those who had repaid their debt.

When characteristics of graduates who had repaid their debt after three years were compared with those of graduates who had not, some differences appear. For example, those who had outstanding debt after three years were less likely to be single, to reside in Ontario and to have a parent with a university credential. In addition, they were more likely to be older and to have a disability.

However, these numbers represent unadjusted proportions, which means that some of the gaps observed between the graduates who have and have not completely repaid their debt could be caused by a concentration of the graduates in certain subgroups. Consequently, a linear regression model has been estimated to take all these variables into account simultaneously, and to determine which variables are associated with faster or slower debt repayment. The results are presented in the next section.

Some factors are associated with faster student debt repayment

Although the 2018 NGS does not include information on graduates' entire financial situation,¹⁵ it is possible to find correlations between the reduction of student debt and certain student characteristics—such as employment income, the size of debt at graduation, family situation, province of residence in 2018¹⁶, parents' level of education¹⁷ and debt source (government-sponsored student loan, bank loan or line of credit, loan from family or friends)—and certain sociodemographic characteristics (such as sex, age, immigrant status, visible minority status, Indigenous identity and having a disability).

Master's, doctorate and professional degree holders were grouped together. Separate models were estimated for the three following levels of study: college graduates, bachelor's graduates, and master's, doctorate and professional graduates combined together. Only graduates who reported having student debt at graduation in 2015 were included in this analysis (Table 4).

Although some differences were observed across the three levels of study, the models show that factors—such as having a smaller debt size at graduation, a higher employment income, living in Ontario, being part of a couple with no children, and having student debt from a bank loan or line of credit, or a loan from family or friends—were all associated with relatively faster debt repayment after three years. In contrast, living in the Atlantic provinces or in Quebec,¹⁸ being a single parent, being a member of a visible minority group (college only), and having a disability all tended to be associated with slower student debt repayment.

As observed with the unadjusted data (Table 3), the amount of the debt at graduation was also an important factor. For example, three years after graduation, a bachelor's degree holder with a debt of \$25,000 or more at graduation would have repaid 42% less of their debt than their counterpart with a debt of less than \$5,000 (Table 4). The debt reduction by debt size was similar across all levels of study.¹⁹

In addition, results indicate that for every \$1,000 of income earned, 0.2% of student debt was repaid. This means that if a bachelor's degree holder earned \$40,000 per year, 8% of their debt was repaid after three years (or $40 \times 0.2\%$).

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Table 3
Characteristics of graduates with student debt at graduation (in 2015), by repayment status three years later (in 2018)

Characteristics	All levels of study		College		Bachelor's degree holders		Master's, doctorate and professional degree holders	
	Full debt repayment	Remaining debt	Full debt repayment	Remaining debt	Full debt repayment	Remaining debt	Full debt repayment	Remaining debt
Proportion	35.6	64.4	34.0	66.0	35.5	64.5	38.5	61.5
Median debt at graduation (\$)	9,926	21,936	5,823	14,978	12,542	25,319	12,820	29,815
	percent							
Employment income categories (in 2018)								
No employment income	11.7	15.5	10.3	14.3	11.5	15.7	14.3	17.2
Less than \$15,000	1.4	2.1	2.3	3.3	1.3	1.7	0.5	0.9
\$15,000 to \$24,999	3.5	4.6	6.0	7.0	2.9	4.0	1.0	2.0
\$25,000 to \$44,999	23.3	28.0	40.3	43.2	19.1	24.1	7.6	10.8
\$45,000 to \$59,999	22.0	21.9	25.5	20.5	23.0	24.5	15.3	18.5
\$60,000 to \$74,999	20.7	15.8	9.5	7.9	26.8	18.6	24.4	23.2
\$75,000 and more	17.3	12.0	6.0	3.9	15.6	11.4	37.0	27.3
Debt size								
Less than \$5,000	24.8	4.4	38.4	7.6	19.0	2.9	16.9	2.6
\$5,000 to less than \$10,000	20.4	12.5	24.3	21.3	17.8	7.6	20.0	8.7
\$10,000 to less than \$25,000	34.7	37.5	31.0	44.2	37.3	34.9	34.4	31.8
\$25,000 or more	20.2	45.5	6.3	27.0	25.8	54.6	28.7	56.9
Family status								
Couple, with children	16.3	18.6	16.9	18.6	12.1	14.8	23.9	27.4
Couple, no children	28.3	26.8	25.7	21.5	26.9	27.8	34.8	33.7
Single, with children	2.0	5.3	2.8	9.0	1.6	3.4	1.8	3.3
Single, no children	53.3	49.2	54.6	50.9	59.4	53.9	39.4	35.7
Province of residence in 2018								
Newfoundland	0.7	0.9	0.3	0.4	0.8	1.2	1.0	1.2
Prince Edward Island	0.5	0.7	0.9	1.0	0.3	0.5	0.3	0.4
Nova Scotia	2.2	4.2	3.5	5.3	1.3	3.6	2.2	3.6
New Brunswick	1.8	2.8	2.3	3.8	1.7	2.3	1.2	2.0
Quebec	21.7	24.1	18.0	18.0	19.9	24.0	30.6	34.7
Ontario	44.7	39.6	41.0	43.5	47.7	38.5	44.2	35.4
Manitoba	2.5	2.9	3.4	2.5	2.3	3.3	1.6	2.5
Saskatchewan	2.2	3.1	1.6	3.1	3.0	3.5	1.6	2.3
Alberta	10.5	10.8	12.2	12.1	10.7	11.0	7.5	8.4
British Columbia	12.0	10.7	14.9	10.3	11.4	11.7	9.2	8.9
Territories	1.1	0.3	1.8	0.1	0.9	0.4	0.6	0.4
Parents' level of education¹								
Less than high school	9.9	12.7	12.6	14.9	8.9	12.4	8.2	9.8
High school	20.8	25.7	25.5	30.0	20.8	24.6	14.2	20.8
College or trades	28.8	27.8	30.8	32.1	32.0	28.2	19.8	19.5
University	40.4	33.7	31.1	23.0	38.3	34.8	57.9	49.9
Debt sources²								
Government-sponsored loans	63.4	81.0	48.6	79.1	72.0	84.3	67.3	76.8
Loans from family or friends	29.3	19.8	42.4	20.2	22.9	18.6	23.4	21.8
Loans from bank or line of credit	21.8	33.8	22.0	24.1	18.7	33.5	27.5	51.3
Personal characteristics								
Female	54.7	61.0	50.5	63.3	54.5	60.3	60.8	58.5
Older than median age at graduation	37.2	47.6	45.2	48.1	32.7	48.1	34.7	45.8
Ever been a landed immigrant	20.7	21.7	18.7	20.9	19.1	20.5	26.4	25.8
Visible minority status	30.6	30.9	27.4	30.8	32.2	31.4	31.9	30.1
Aboriginal status	2.2	2.4	2.9	2.5	2.5	2.7	0.5	1.5
Has a disability	22.0	28.4	25.4	30.8	21.8	28.1	17.7	25.3

1. This variable generally refers to father's education; if that information was not available, it refers to the mother's education.

2. The sum of graduates by debt sources is greater than 100% because some graduates have multiple debt sources.

Source: Statistics Canada, National Graduates Survey, 2018.

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Table 4
Coefficients of the linear regression model on the decrease of the debt of graduates, 2015 postsecondary graduates

Factor affecting debt repayment	Model on percentage reduction of student debt		
	Level of study		
	College	Bachelor's	Master's, doctorate and professional
	percent		
Employment income in 2018 (per \$1,000)	0.2**	0.2**	0.2**
Size of student debt at graduation			
Less than \$5,000	...	...	...
\$5,000 to less than \$10,000	-19.2**	-12.1**	-13.8**
\$10,000 to less than \$25,000	-30.6**	-27.9**	-27.9**
\$25,000 or more	-45.7**	-42.3**	-41.1**
Family situation			
Couple, with children	-4.0	-2.4	-2.3
Couple, no children	...	...	...
Single, with children	-15.6**	-17.2**	-4.3
Single, no children	-2.5	-2.1	1.7
Province of residence three years after graduation			
Newfoundland	-10.2***	-11.1**	-2.5
Prince Edward Island	-9.6**	-10.4**	-8.3*
Nova Scotia	-7.8*	-15.3**	-10.0**
New Brunswick	-9.6**	-6.9***	-11.7**
Quebec	-8.3**	-11.4**	-12.2**
Ontario	...	...	...
Manitoba	-3.8	-1.6	-9.8***
Saskatchewan	-5.6	-4.7	-13.2**
Alberta	1.3	-4.1	-4.7
British Columbia	-9.9*	-3.7	-3.0
Territories	28.6**	9.1	-7.1
Parents' level of education¹			
Less than high school	-2.1	1.9	1.6
High school (ref.)	...	...	...
College or trades	-2.2	5.8*	6.2*
University	0.2	3.9	7.3**
Source of debt			
Percentage of student debt from loan from family or friends	0.2**	0.1*	0.1*
Percentage of student debt from bank loan or line of credit	0.1**	0.0	-0.1**
Demographic characteristics			
Female	-3.3	-1.3	2.7
Older than median age at graduation	-0.7	-6.7**	-6.6**
Ever been a landed immigrant	7.7***	-1.1	-3.1
Visible minority status	-11.2**	-1.0	1.5
Aboriginal status	-5.3	1.7	-1.1
Has a disability	-6.6**	-5.6*	-4.0*

... not applicable

* significantly different from reference category (ref.) (p < 0.05)

** significantly different from reference category (ref.) (p < 0.01)

*** significantly different from reference category (ref.) (p < 0.10)

1. This variable generally refers to father's education; if that information was not available, it refers to the mother's education.

Source: Statistics Canada, National Graduates Survey, 2018.

The proportion repaid would be 16% for a bachelor's degree holder who earned \$80,000 per year (or $80 \times 0.2\%$), assuming all other factors remain constant.

The impact of employment income on debt repayment was similar across all education levels. However, it is important to note that the effect measured only accounts for the annual employment income of the graduate at the time of the interview (in 2018), and does not account for breaks in employment in the three years following the graduation.

Parents' level of education also made a difference for some categories of university graduates. Graduates with a parent that had a postsecondary credential generally repaid their debt faster. Graduates who owed money to family or friends, or to a bank or line of credit, also repaid a higher proportion of their debt, compared with graduates who owed money on a government-sponsored student loan.

Some factors were also associated with slower debt repayment. For example, being older than the median age of one's graduating class²⁰ was associated with a lower proportion of debt repayment at the bachelor's level and at the master's, doctorate and professional level. These graduates repaid almost 7% less of their student debt compared with their counterparts who were at or younger than the median age of their graduating class. It is possible that older graduates have other debt as a result of being at a later stage in life. This could be particularly true for graduates with master's, doctorate and professional degrees, whose median ages were between 30 and 36 in 2018 (compared with 27 for college graduates and bachelor's degree holders).

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In addition, graduates at each level of study who lived in the Atlantic provinces and Quebec were more likely to have repaid a smaller proportion of their debt than those who lived in Ontario.²¹

Reporting a disability was also associated with slower debt repayment. Being a landed immigrant or a member of a visible minority group resulted in slower debt repayment for college graduates only.

These results are those of the 2015 cohort, observed three years after graduation and may change depending on the cohort and the period that is being examined. Although it takes the majority of graduates more than three years to repay their student debt, a previous study showed that most graduates who defaulted on their student loans did so in the first three years after graduation.²² This suggests that the financial situation of graduates in the years immediately following graduation is important for debt repayment.

Conclusion

Between 2000 and 2015, one in two postsecondary graduates graduated with student debt. This proportion was similar for most levels of study throughout this 15-year period. The majority of graduates (95%) earned a credential at the college, bachelor's or master's level. The proportion of students who graduated with student debt tended to be lower among doctorate degree holders, at 36% in 2015, while 85% of professional degree holders graduated with student debt.

These results were based on the last four cycles of the National Graduates Survey, which also collects information on the amount of debt owed by graduates. For the majority of graduates, the median amount of student debt at graduation has remained relatively stable in real terms between 2000 and 2015, but tended to increase with the level of postsecondary education. College graduates had the lowest amount of student debt (\$11,500 in 2015), followed by bachelor's and master's degree holders (around \$20,000) and doctorate degree holders (\$25,400). Given their higher tuition fees and many additional educational expenses, professional degree holders had the largest amount of student debt of all postsecondary graduates, at \$60,300.

Field of study is also an important factor in the proportion of graduates with debt, and the level of student debt. The largest share of 2015 graduates who graduated with student debt were graduates of health and related studies programs. These graduates also had the largest amount of debt. This was the case for most levels of study within this field.

Government-sponsored student loans were the most common debt source among the 2015 graduates, with three in four graduates reporting this type of debt. Median debt at graduation was also highest for government-sponsored student loans, with a median of almost \$15,000 in 2015. This might be partly explained by the fact that government-sponsored student loans have the advantage of not accumulating interest until after the student completes their education.

Of all 2015 postsecondary graduates who graduated with student debt, two-thirds had not fully repaid it by 2018. This proportion was similar across levels of study. Using a linear regression model on the repayment of the debt after three years, some factors were associated with faster and slower debt repayment. Despite some differences by level of study, factors such as a smaller debt size at graduation, higher employment income, living in Ontario and being part of a couple with no children were generally associated with a higher proportion of debt being repaid after three years. Conversely, higher levels of student debt, living in the Atlantic provinces or in Quebec, being a lone parent, graduating at a relatively older age and reporting a disability were associated with a lower proportion of debt being repaid after three years.

These results were collected between 2000 and 2018 and were therefore collected before the COVID-19 pandemic. Results from a Statistics Canada crowdsourcing initiative recently showed that, because of COVID-19, a majority of students were worried about their financial situation and their level of debt once they finished their studies. Future cycles of the NGS will be instrumental in shedding light on the impact of COVID-19 on the student debt of graduates.

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Data sources, methods and definitions

Data source

The 2018 National Graduates Survey (NGS) collected information on individuals who graduated from a public postsecondary institution in Canada in 2015. The questions relate to educational pathways; the financing of postsecondary studies, including government-sponsored student loans; and the transition to the labour market. The target population for this survey is the 2015 postsecondary graduates who were residing in Canada at the time the survey was conducted in 2018.

This study focuses only on college and university graduates who did not pursue further education after graduation in 2015 (i.e., up to the time the NGS was conducted in 2018).

The NGS asks respondents whether they graduated their program with student debt and, if so, what the debt source was (i.e., government-sponsored student loan, bank loan or line of credit, or loan from family or friends that must be repaid). The NGS also asks how much of the debt to each source remained unpaid at the time of the interview, three years after graduation.

Limitations

The NGS is not appropriate for looking at Canadian and international students separately. The target population for the NGS corresponds to the graduates of the calendar year who were still living in Canada at the time of the interview (2 or

3 years after graduation depending on the cycle). Therefore, international students within the sample are not representative of international students as a proportion leaves the country after graduation.

Definitions

College level: Includes college and non-university certificates and diplomas, and diplomas or certificates from general and vocational colleges (CEGEPs).

Bachelor's level: Includes bachelor's degrees and university certificates and diplomas below the bachelor's level.

Master's level: Includes master's degrees and university diplomas and certificates above the bachelor level, including MBAs.

Professional level: Includes bachelor's degrees and university certificates or diplomas above the bachelor's level in medicine, dentistry, veterinary medicine, optometry and pharmacy.

Employment income: Annual salary including tips and commissions, before taxes and all other deductions, for the job held during the week prior to the 2018 NGS, received by 2015 postsecondary graduates who did not pursue further education. When earnings are reported as an hourly rate, they are annualized using a standard weekly work schedule.

Notes

1. See Frenette 2014.
2. See Fortin 2018.
3. See Luong 2010.
4. The Labour Force Survey reported a 23.6-percentage-point decrease in the employment rate of students aged 20 to 24, dropping from 52.5% in February 2020 to 28.9% in April 2020.
5. Statistics Canada has conducted several crowdsourcing initiatives since the beginning of the COVID-19 pandemic. The crowdsourcing initiative referenced here was conducted from April 19 to May 1, 2020, and refers to students returning to school in fall 2020 (graduates of 2020 were excluded from the analysis). This crowdsourcing initiative did not use survey sampling principles. Therefore, the results cannot be applied to the postsecondary student population in Canada as a whole. However, the sample size consisted of over 100,000 participants. Many participants reported being worried that they would use up their savings (68%), that they would have trouble paying for their current expenses (51%) or for next year's tuition (51%), or that they would have to take out additional student debt (54%). See Statistics Canada 2020.
6. Many research or teaching assistant positions at universities are now unionized, and provide relatively high hourly wages. Unionization takes place on a school-by-school basis, with some schools unionized earlier and some later, and some not unionized yet. For example, the rate of pay for TA/RA work at the University of Ottawa in 2018-2019 was \$43.98 per hour.
7. In comparison, 45% of professional degree holders, one-third of master's and bachelor's degree holders, and 13% of college graduates reported having a scholarship, fellowship, award or prize. Meanwhile, between 1% and 21% of graduates other than doctorate degree holders had research or teaching assistantships.
8. Source: Statistics Canada, Tuition, Living and Accommodation Costs Survey (TLAC), Table 37-10-0003-01. Fields of study in the TLAC are adapted from the 2016 Classification of Instructional Programs. Subtle differences may exist between the field of study categories used by the TLAC and those used by the NGS.

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9. The amount of debt reported by the respondent includes student debt from all postsecondary programs. Therefore, the average debt for higher levels of study does not need to be added to the average debt of prerequisite programs.
10. Debt amounts for all cycles are shown in 2015 constant dollars.
11. A previous study using NGS data showed that the average debt for college graduates and bachelor's degree holders increased by 130% to 140% between 1982 and 1995. See Clark 1998.
12. In the data tables published for the NGS, professional graduates are included in the bachelor's category. In this study, they are considered separately because their student debt levels tend to be markedly different than those of other bachelor's degree holders. The professional category is comprised of graduates with a bachelor's degree or university certificate or diploma above a bachelor's degree in law (LLB, JD, BCL), medicine (MD), dentistry (DDS, DMD), veterinary medicine (DVM), optometry (OD) and pharmacy (PharmD, BS, BSc, BPharm).
13. This proportion relates to all graduates with a government loan, including those who had additional loans from other sources.
14. Canada Student Loans do not need to be repaid in the first six months after graduation and do not accumulate interest for the duration of the student's program, up to a lifetime maximum of 340 weeks of study (400 weeks of study for doctorate students). Quebec, Nunavut and the Northwest Territories do not participate in the Canada Student Loans Program; they receive federal funding and distribute it through their own programs.
15. For example, the NGS did not include information on other types of debt or expenses incurred between graduation and the time of interview in 2018. It is not known whether the graduates were employed throughout the entire three years after graduation, whether they received any financial aid from family or friends, or whether they experienced any other event that may have affected their ability to repay their student debt. The 2018 NGS provides a snapshot of the graduates at the time of the interview.
16. To measure the impact of cost of living, it would have been ideal to use a more detailed level of geography, but the only geographic variable available in the NGS is province.
17. Parents' level of education was measured using the father's level of education when available, or the mother's level otherwise. Four levels of education were tested: less than high school, high school, college and trades, and university (bachelor's level and above).
18. For college graduates, living in the territories was also associated with a lower proportion of debt repayment. Living in Manitoba and Saskatchewan was associated with a lower proportion of debt repayment for the third group of graduates (master's, doctorate and professional degree holders).
19. The amount of debt repaid in dollars was examined in a separate model, but, aside from debt size, no notable differences from the model on the percentage of debt repaid were found. When the dollar amount repaid was examined (data not shown), the trend by debt size was completely reversed: graduates who owed large amounts of student debt had repaid a significantly larger amount of money after three years. For example, bachelor's degree holders who owed \$25,000 or more at graduation would have repaid \$16,000 more of their debt than their counterparts who had a debt of less than \$5,000 at graduation.
20. Median age of a cohort was calculated for each level of study among the graduates who did not pursue further postsecondary education and who graduated with student debt. Median ages at interview were 27 for college graduates and bachelor's degree holders, 31 for master's degree holders, 36 for doctorate degree holders and 30 for professional degree holders.
21. This was also generally the case for graduates living west of Ontario, but the differences were mostly not significant, with the exception of college graduates in British Columbia and university graduates (bachelor's degree holders and others) in Saskatchewan. College graduates in the territories had repaid a significantly higher proportion of their debt after three years, but a smaller percentage was repaid for university graduates other than those at the bachelor's level.
22. A previous study on the federal portion of the Canada Student Loans Program showed that 90% of graduates who consolidated their debt (began repayment) in the 1994/1995 academic year and defaulted on their loans did so within the first three years. See Kapsalis 2006.

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