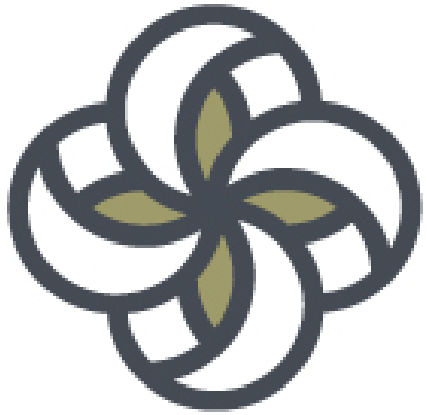

42nd Statistical Report
Canadian Association for Graduate Studies
2016
E. Dianne Looker

Canadian Association for Graduate Studies

42nd Statistical Report, 2016

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1.1 Introduction

The objective of this report is to update the information provided in the 41st Statistical Report, and document the structure and trends in ***post-graduate enrolments*** and ***graduate degrees awarded*** in Canada. Information is presented on the number enrolled, and the number of degrees granted for Master's and doctoral programs in Canada, in most cases for the years 1992 to 2013.

Where relevant, details are provided on enrolments and degrees awarded by: province, gender, field of study, age, and international student status. Details of Master's and doctoral enrolments and degrees granted, *by university*, are presented in Part 2 this Report.

This report will pay particular attention to gender patterns and how they interact with differences and similarities by province, age and international status.

There will also be particular emphasis on trends in the last five years reported: that is, from 2009 to 2013. These years will give an idea of recent trends, and will be highlighted in the tables and figures. Where appropriate, they are highlighted in the figures by a boxed area, and indicated in the tables by a bold dividing line.

All data in this report are based on tables provided to the Canadian Association for Graduate Studies by Universities Canada (formerly the Association of Universities and Colleges of Canada) under an agreement signed by the two organizations. The Canadian Association for Graduate Studies would like to express its appreciation to Universities Canada and their staff for making these data available.

1.2 Executive summary

- **Graduate enrolments**
  - In 2013, the most recent year for which we have data, there were 89,733 full-time and 32,991 part-time Master's enrolments in universities in Canada. In the five years from 2009 to 2013, full-time Master's enrolments increased by 12,249, from 77,484, a 16% increase.
  - In 2013, there were 32,991 full-time and 2,640 part-time doctoral enrolments. In the five years from 2009 to 2013, full-time enrolments increased by 5,568, a 13% increase.

- Ontario, Quebec have had the highest level of full-time graduate enrolments at both the Master's and doctoral level, in every year since 1992 (the first year for which we have data for this report). British Columbia and Alberta consistently rank third and forth in numbers of full-time graduate enrolments.
- The main fields of study with the highest full-time Master's enrolments in recent years (2009-2013) are: Business, management and public administration; Architecture, engineering and related technologies; Social and behavioural sciences and law; and Health and related fields. These fields have also been increasing in recent years.
- The most numerous main fields of study among full-time doctoral enrolments are: Physical and life sciences and technologies; Social and behavioural sciences and law; Architecture, engineering and related technologies and, to a lesser extent, Humanities. All of these fields except Humanities have also been increasing in recent years.
- In 2013, 54% of full-time and 60% of part-time Master's enrolments, and 48% of full-time and 50% of part-time doctoral enrolments were by females.
- Full-time Master's have been more than 50% female since 1997. At no time since 1992 have full-time doctoral enrolments been more than 50% female.
- In virtually every province there was a larger increase since the early 1990s for females than for males among full-time Master's and doctoral enrolments. The one exception is that the increase over time for males among full-time Master's enrolments was higher in New Brunswick.
- Among both Master's and doctoral enrolments females tended to dominate in: Education; Visual and performing arts and communications technologies; Health and related fields, and Social and behavioural sciences and law.
- Females tended to be underrepresented among both Master's and doctoral enrolments in: Architecture, engineering and related technologies; Mathematics; Computer and information sciences; and Personal, protective and transportation services.
- In 2013, 24% of full-time Master's and 30% of full-time doctoral enrolments were by international students. From 2009 to 2013, international enrolments increased by 58% (from 13,689 to 21,612) among full-time Master's enrolments and 47% (from 10,101 to 14,820) among full-time doctoral enrolments.
- The percent of females among full-time graduate enrolments by international students has not increased in the last five or indeed the last ten years.

- The provinces with the highest percentage of full-time international Master's enrolments are: Newfoundland and Labrador, New Brunswick and Saskatchewan. For full-time doctoral enrolments, the provinces with the largest percentage of international enrolments are: Newfoundland and Labrador, Saskatchewan and Alberta.
- Ontario, the province with the highest number of overall graduate enrolments ahs the lowest percentage of international students among these enrolments.
- International enrolments were highest among full-time graduate enrolments in the main fields of: Architecture, engineering and related technologies and Mathematics; Computer and information sciences.
- International enrolments were consistently low among full-time graduate enrolments in the main fields of: Visual and performing arts and communications technologies; Humanities; Social and behavioural sciences and law; and Health and related fields
- The largest age group among full-time Master's enrolments is (and has been since 1992) those less than 25 years of age.
- The largest age group among full-time doctoral enrolments is (and has been since 1992) those 25-29 years of age.
- The percent female is highest among the youngest and the oldest age groups, for both Master's and doctoral full-tiem enrolments.
- The percent international is highest among the 25 to 29 year age group for both Master's and doctoral full-time enrolments. For full-time Master's enrolments the percent international has been increasing in recent years for those less than 25 years of age.
- As was seen in the 41st Statistical Report, there has been a shift away from Europe to Asia in terms of the world region from which full-time international graduate enrolments are drawn. In 2013, 13% of Master's and 18% of doctoral full-time international enrolments were from Europe. In 2013, 65% of full-time Master's and 53% of full-time international doctoral enrolments were from Asia.
- More than three quarters (77%) of full-time Master's enrolments by Canadian citizens and permanent residents report the same province of residence as the one in which they are enrolled for a graduate program. The equivalent number for full-time doctoral enrolments is 70%. The percentage of full-time graduate enrolments from other provinces is highest in: Newfoundland and Labrador; Nova Scotia, Alberta and Saskatchewan.

- **Graduate degrees granted**
  - In 2013, there were 46,698 Master's degrees granted in Canada (up from 19,434 in 1992), and 7,059 doctoral degrees granted (compared to 3,125 in 1992). The number graduating has been increasing in recent years.
  - In 2013, 56% of the Master's degrees and 45% of the doctoral degrees awarded went to females.
  - In 2013, 42% of the Master's degrees and 33% of the doctoral degrees were awarded to international students. The number and percentages of international students among these graduates has increased in recent years.
  - Ontario and Quebec have the most graduates.
  - The same fields of study dominated graduates as was true for enrolments.
  - In 2013, 12% of Master's degrees and 22% of doctoral degrees granted to international students went to those from Europe. The same year, 66% of Master's degrees and 47% of doctoral degrees granted to international students went to those from Asia.

1.3 Information presented in the report

The information presented in this report is based on Statistics Canada data, provided to the Canadian Association for Graduate Studies by Universities Canada. This information is based on reports submitted by universities to Statistics Canada. No attempt has been made to verify the data sent by Universities Canada.

Much but not all of the information provided in the current report may also be accessed directly from Statistics Canada's socio-economic data base, CANSIM. Information on graduate enrolments can be found in CANSIM tables 477-0019, 477-0029, and 477-0033; that on degrees awarded are in CANSIM tables 477-0020 and 477-0034. (Some of the data on degrees awarded obtained from Universities Canada for this report were supplemented with data from CANSIM table 477-0020 to extend the time frame to match other tables.)

If graduate programs were added or dropped, or changed in some way that affects either enrolment rates or degrees granted, these changes can have a major, unexplained, impact on numbers for the affected institution(s), and provincial totals.

Information in this report is restricted to graduate enrolments and degrees granted in degree programs. That is, omitted are those in graduate diploma or certificate programs, residency programs and those enrolled in non-program courses.

All the data provided are subject to Statistics Canada random rounding procedure (see below). This rounding can have a dramatic effect on those institutions with relative small numbers with respect to the measure being reported. For this reason, caution should be exercized in interpreting shifts over time when relatively small numbers are involved.

Note that Statistics Canada has revised and updated some information for 2011 and 2012, so the numbers in this Report for those years do not exactly match those in the 41st Statistical Report, although the differences in the two reports are very minor.

The information in the report takes various forms. One involves tables showing numbers, often over a time period. These numbers provide information on the *volume of enrolments or degrees granted.* So, if one wants to know what the trend in numbers is over time, or how many are enrolled in Master's or doctoral programs, or how many degrees were awarded at any given time, these tables provide the relevant detail.

The tables by field of study can give an indication of how these graduate enrolments are clustered. However, it is important to keep in mind that identifying, for example, which "field of study" has the most enrolments to a large extent reflects how the fields are organized and collapsed. For example, combining "Humanities" and "Social and Behavioural Sciences and Law" would increase the number in that "field". Information about the Classification of Instructional Programs, that forms the basis of the analyses of field of study, can be found at: http://www.statcan.gc.ca/pub/12-590-x/12-590-x2012001-eng.pdf.

In the analysis of detailed field of study, several fields were omitted because they had few, if any graduate enrolments. These include Engineering technology, and Communications technologies and support services which have recently had some graduate enrolments. These omitted fields are included in the totals reported in various figures and tables.

Another type of analysis involves looking specifically at the extent of *change over time*. This procedure sometimes involves looking at the absolute increase over time (how many more or fewer students/graduates); other times the rate of growth (percentage change) over time is examined. Obviously the percentage change reflects the size of the change relative to the level at the starting point. An increase of 100 individuals is a larger percentage increase if one started at 500 than if the original number were 2,000.

An important limitation to the data over time derives from the fact that there are sometimes missing or inconsistent data for particular institutions. For example, the University of Regina did not provide any data from 2005-2008, affecting both provincial and, sometimes, overall totals. There is an unexplained drop in degrees granted from the University of Saskatchewan from 2011 to 2012. Also, there was an apparent change in the definition of "full-time" versus "part-time" at the University of Montreal in 1998, and at

Concordia University in 2005, evident in the decrease in part-time enrolments and an equivalent increase in full-time enrolments. The latter is somewhat less obvious because of the large number of full-time enrolments, so changes at one institution have less of an effect. However, these shifts affect who is included in all of the "full-time enrolments" tables over time.

Charts which complement (or sometimes replace) the detailed tables are used to visually illustrate the relevant changes over time.

So, there are four key pieces of information presented in this report that will be of interest to readers:

1. The *absolute number* of enrolments or degrees granted *in 2013*, the most recent year for which data are available. When these numbers are broken down by province, or gender, or immigration status, they give a portrait of graduate enrolments in Canada.
2. The *number of enrolments or degrees granted over time*. For most measures we have data from 1992 to 2013; for some just for 1999-2013, or a shorter time frame. In those sections where one is examining a detailed breakdown (e.g. by province or by field of study), presenting all the data would make a table prohibitively large and complex. In order to clarify the relevant patterns, data are sometimes presented for 1993, 2003 and 2013. (However, as noted above, in most cases more detail can be obtained from the CANSIM tables, listed above.) Further the text and the data highlight the years 2009 to 2013, the most recent years for which we have data.
3. The *change in enrolments or degrees granted over time*. Again, for ease of presentation, in most instances these are presented for the years 1993 to 2013 (and sometimes also for changes 1993-2003 and 2003-2013). One or both of the absolute and percentage changes are presented.

1.4 Methodological notes

Notes from Statistics Canada:

- **Fall snapshot:** Enrolments are based on students enrolled in the postsecondary institutions at the time of the fall snapshot date, that is, a single date chosen by the institution which falls between September 30th and December 1st . Therefore students who are not enrolled during this time period are excluded and enrolment totals do not represent a full academic year.
- **Program counts:** It should also be noted, enrolments are based on program counts and not student counts. If a student is enrolled in more than one program as of the snapshot date, then all of their programs are included in the count.
- **Random rounding:** All counts are randomly rounded to a multiple of 3 using the following procedure: counts which are already a multiple of 3 are not adjusted; counts one greater than a multiple of 3 are adjusted to the next lowest multiple of 3

with a probability of two-thirds and to the next highest multiple of 3 with a probability of one-third. The probabilities are reversed for counts that are one less than a multiple of 3.

Notes from Universities Canada:

- **Use of estimates (Imputed institutions):** Enrolment and graduate counts for certain institutions are preliminary or based on estimates.
    - University of Ontario Institute of Technology, 2008.
    - University of Victoria 2004-2007.
- **Institutions no longer surveyed:** Due to a revision of the institutions in the survey, the following are not included as of 2008/2009 for enrolments and 2008 for graduates: in New Brunswick, Bethany Bible College; in Ontario, Institut de pastorale des Dominicains, Tyndale University College and Seminary, Redeemer University College, Royal Military College of Canada; in Alberta, Newman Theological College; in British Columbia, Regent College, Vancouver School of Theology, Trinity Western University, and Seminary of Christ the King.
- **Changes in institutional status:** The following institutions, previously colleges, changed to university status.
    - As of 2002/2003 reporting year: Ontario College of Art and Design (Ontario);
    - as of 2004/2005 reporting year: Alberta College of Art and Design (Alberta);
    - as of 2005/2006 reporting year: University College of the Cariboo and Open Learning Agency (British Columbia);
    - as of 2008/2009 reporting year: Capilano College, Malaspina University College, Emily Carr Institute of Art and Design, Kwantlen University College and University College of the Fraser Valley (British Columbia);
    - as of 2009/2010 reporting year: Grant McEwan University and Mount Royal University (Alberta);
- **Changes in reporting:**
    - in 2013/2014, data for the Nova Scotia Agricultural College are reported by Dalhousie University;
    - in 2013/2014, the Collège Dominicain de philosophie et de théologie became a campus of Carleton University;
    - in 2013/2014, graduate data for Algoma University College are reported by Laurentian University while their enrolment data are reported by Algoma University.

- **Changes in registration status:** Users of the enrolment data should be aware that many reporting anomalies exist in the institutional time-series. Some institutions have changed the course load requirements to classify students into the full- and part-time categories, causing significant breaks in at least their own institutional time series data
    - University of Manitoba - 1993 to 1994, where to qualify for full-time study the course load requirement fell to 60% in 1994 from 80% in 1993;
    - Université de Montreal, changes as of 1997;
    - For University of Saskatchewan, the definition of full-time and part-time has changed. The registration status for enrolments in 2008/2009 refers to the September to December period. In the previous years, it referred to the September to April period.
    - University of British Columbia, changes as of 2009.
- **Home province (province of residence)**: Under counting is likely due to incomplete reporting of permanent address. Use with caution.
- **Classification of Instructional Programs (CIP) Coding:** The first Canadian version of this classification (listed in this report as "field of study") appeared in the year 2000. CIP coding in earlier years – 1992 to1999 - should be interpreted with caution. This coding is used in the "Main field of study" and " Detailed field of study" tables and charts.
- **University of Regina:** From 2005 to 2008 enrolments and graduates counts for the University of Regina are not available.
- **University of Saskatchewan:** residency counts in the health-related programs are not included as of 2008/2009 for enrolments and 2008 for graduates.
- **Quebec institutions**: The graduate counts for the Quebec institutions up to and including 2008 do not include micro programs and attestations however, as of 2009, these are included.
- **University of Winnipeg:** A large portion of the graduate programs, (program type = 59) for University of Winnipeg for 2011/12 and 2012/13 are not reported. These are the Theology and Marriage and Family programs. Due to a constraint in their student information system they cannot extract information on these programs.

1.5 Portrait of graduate enrolments in Canada, 2013

Table 1.1 – Profile of full-time Master's and doctoral enrolments in Canada, 2013

		Full-time Master's	Percent in 2013	Full-time Doctoral	Percent in 2013
Total Enrolments Canada		89,733	100	48,726	100
Gender	Male	40,890	45.6	25,434	52.8
	Female	48,825	54.4	23,286	47.2
International enrolments		19,599	24.1	13,767	30.4
Province of study	Newfoundland and Labrador	1,422	1.6	585	1.2
	Prince Edward Island	246	0.3	60	0.1
	Nova Scotia	2,901	3.2	726	1.5
	New Brunswick	942	1.0	438	0.9
	Quebec	24,399	27.2	15,033	30.9
	Ontario	35,229	39.3	19,062	39.1
	Manitoba	2,262	2.5	996	2.0
	Saskatchewan	2,538	2.8	1,164	2.4
	Alberta	8,478	9.4	4,827	9.9
	British Columbia	11,313	12.6	5,832	12.0
Age groups	<25 years	30,552	34.0	2,514	5.1
	25-29 years	31,026	34.5	19,593	40.2
	30-34 years	10,965	12.2	13,278	27.3
	35 years and over	13,122	14.6	12,621	25.9
Main field of study	Agriculture, Natural Resources, Conservation	3,204	3.6	1,572	3.2
	Architecture, Engineering & Related Technologies	14,535	16.2	9,039	18.6
	Business, Management & Public Administration	17,613	19.6	1,824	3.7
	Education	5,571	6.2	2,718	5.6
	Health & Related Fields	12,801	14.3	3,840	7.9
	Humanities	5,169	5.8	4,761	9.8
	Mathematics, Computer & Information Sciences	5,211	5.8	2,796	5.7
	Personal, Protective & Transportation Services	144	0.2	15	0.0
	Physical & Life Sciences & Technologies	9,051	10.1	10,200	20.9
	Social & Behavioural Sciences & Law	12,984	14.5	10,128	20.8
	Visual & Performing Arts & Communications Tech	2,667	3.0	1,233	2.5
	Other	783	0.9	600	1.2

Source: Statistics Canada

Table 1.1 gives the overall portrait of full-time enrolments in Canada in 2013. At that time there were 89,733 full-time Master's and 48,726 full-time doctoral enrolments. In data not shown, there also 32,991 part-time Master's enrolments and 2,640 part-time doctoral enrolments. For reasons outlined below, the focus of this Report (and the 41st Statistical Report) is primarily on full-time enrolments.

Over half of all full-time Master's enrolments and 47% of full-time doctoral enrolments in 2013 were by females. Twenty-four percent of full-time Master's enrolments in 2013 were by international students. The corresponding figure for full-time doctoral enrolments was 30%.

The largest concentration of graduate enrolments is in universities in Ontario (39% of full-time Master's and 39% of full-time doctoral enrolments) and Quebec (27% and 31%). However, a third of full-time graduate enrolments in 2013 were outside these two provinces. British Columbia has 13% of full-time Master's and 12% of full-time doctoral enrolments. Alberta follows closely behind with 9% of full-time Master's and 10% of full-time doctoral enrolments in 2013.

Not surprisingly the age distributions of full-time Master's and doctoral enrolments differed. More of the Master's enrolments are concentrated in the younger age groups, while doctoral enrolments tend to be older. So, among full-time Master's enrolments in 2013, 34% were under 25 years of age; 35% were 25-29; 12% were 30-34 and 15% were 35 years of age and over. The equivalent percentages for full-time doctoral enrolments in 2013 were: 5% under 25, 40% 25-29 years of age, 27% 30-35 years of age, and 26% 35 and over.

Slightly different fields of study dominated the Master's and doctoral full-time enrolments. Those with the largest concentrations at the Master's level were: Business, Management and Public Administration (20%), Architecture, Engineering and Related Technologies (16%), Social and Behavioural Sciences and Law (15%) and Health and Related fields (14%).

Concentrations in full-time doctoral enrolments are seen in: Physical and Life Sciences and Technologies (21%), Social and Behavioural Sciences and Law (21%), and Architecture, Engineering and Related Technologies (19%).

1.6 Full-time and part-time enrolments at the Master's and doctoral levels

Looking back over time gives us information on the trends in enrolments which lead up to the patterns in 2013. As was evident in the 41st Statistical Report, there has been an increase in both Master's level and doctoral enrolments over the period 1992 to 2013. See Table 1.2, and Figure 1.1 to Figure 1.4. There are more than twice as many students enrolled full-time at the Master's level in 2013 as

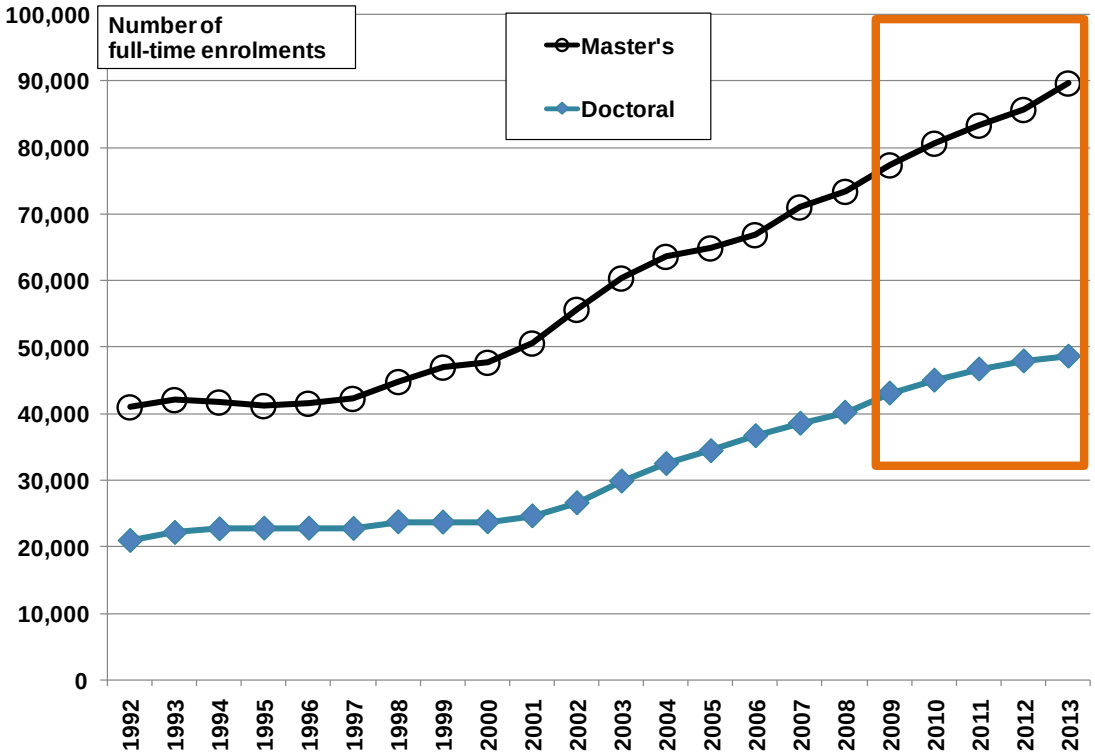
1992 (89,733 in 2013 compared to 40,989 in 1992). The largest increase in full-time Master's enrolments was from 2001 to 2002 – an increase of over 5,000, comprising a 10% increase in that year. (An eight percent increase was evident from2002 to 2003.)

Full-time doctoral enrolments also increased during this time period, going from 20,910 in 1992 to 48,726 in 2013. The largest increase in full-time doctoral enrolments was from 2002 to 2003, an increase of 3,279 (12% increase). There were some minor downturns in full-time enrolments in the mid to late 1990s, for both Master's and doctoral enrolments.

In the last five years (see the boxed area in the figures) there has been a steady increase in both Master's and doctoral full-time enrolments. The *rate* of increase seems to be a bit lower in the last few years, being under 5% since 2009. Indeed the rate of increase has been declining for both Master's and doctoral enrolments since 2009. This decline does not change the fact that there has been an increase in *numbers* of full-time enrolments for some time.

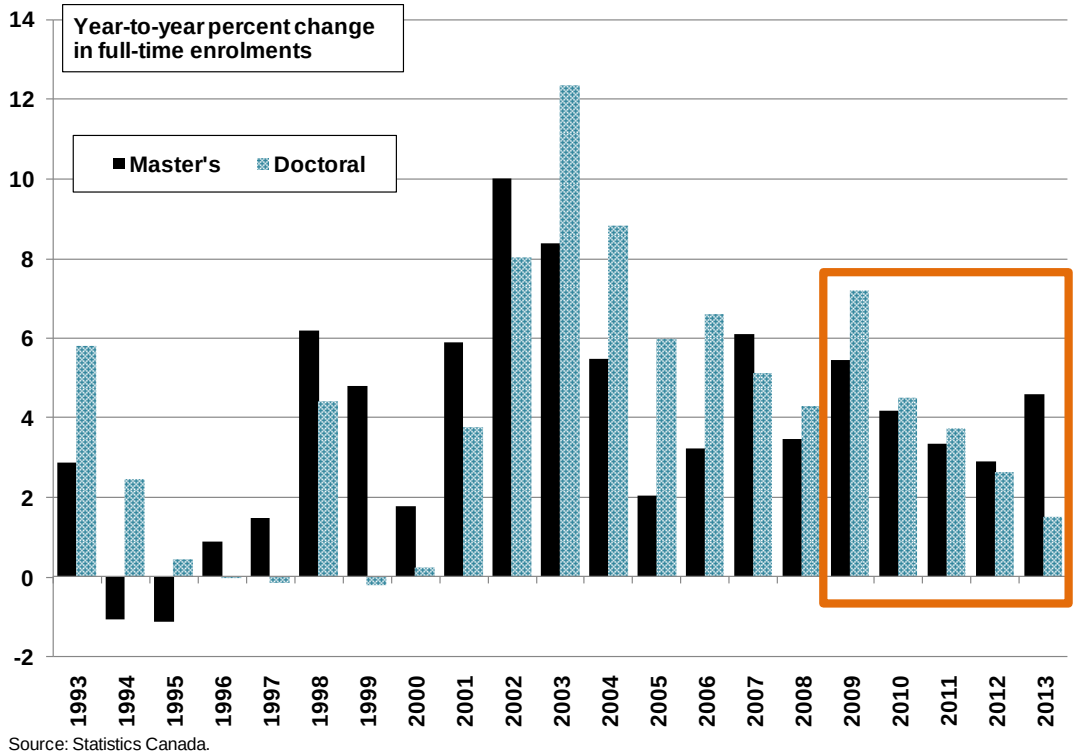
Full-time Master's enrolments increased close to 5% from 2012 to 2013. Full-time doctoral enrolments only increased about 2% in that time period. Typically, as one might expect (since you normally need a Master's degree to enroll in a doctoral program), increase in doctoral enrolments happen one or more years later than increases in Master's enrolments.

Figure 1.1 - Full-time Master's and doctoral enrolments, Canada, 1992-2013



Source: Statistics Canada.

Figure 1.2 –Full-time Master's and doctoral enrolments, percent annual change,1992-2013



Source: Statistics Canada.

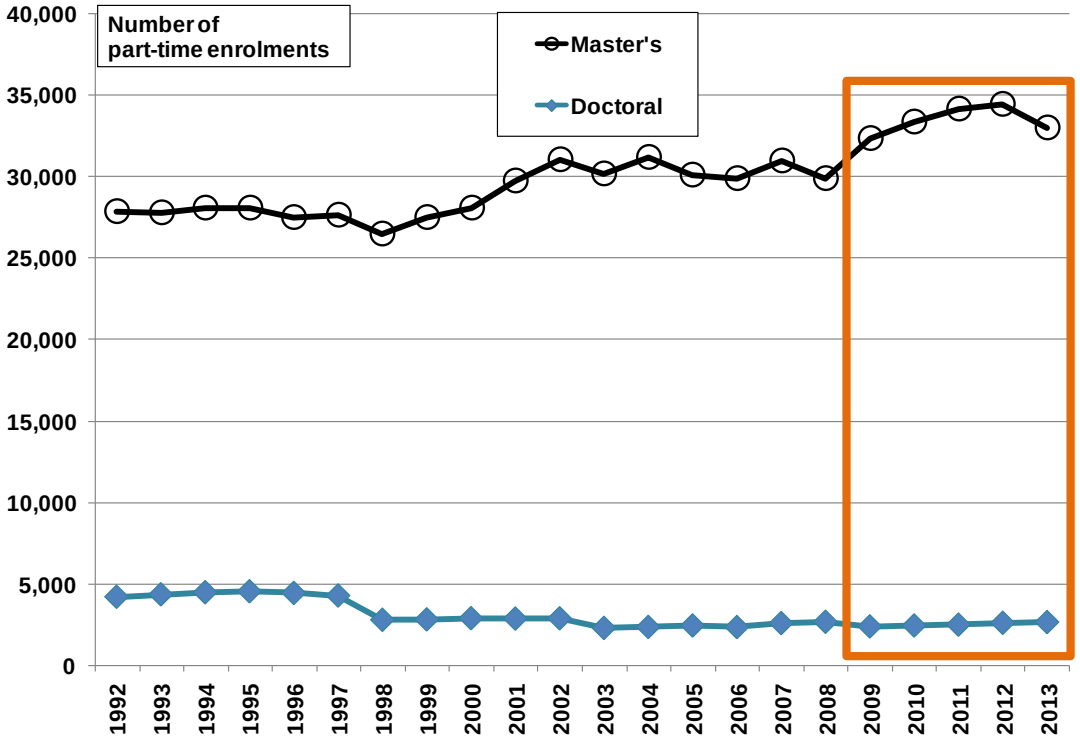
The patterns of change in part-time graduate enrolments are rather different than for full-time. Much of the reason for this is that, over time, universities change the criteria for what counts as part-time versus full-time enrolment (see the Methodological Notes, above). Many of the patterns therefore reflect these administrative changes. Also, the different fields of study vary in the propensity to have significant numbers in part-time versus full-time studies.

That said, the general pattern is for an ongoing increase in part-time enrolments at the Master's level. There are downturns in the numbers of part-time enrolments at different points in time. Most recently, there was a decrease of 4% in part-time Master's enrolments from 2012 to 2013. See Figure 1.3 and Figure 1.4.

The number (and percentage) of students pursuing doctoral studies part-time are much lower than for Master's. The numbers of part-time doctoral enrolments has basically been flat since about 1998. That pattern has not changed in recent years. Given the small numbers and the fluctuations caused by administrative changes, the percentage change can be large. So, from 2006 to 2007 there was an increase of over 10% in part-time doctoral enrolments; from 2008 to 2009 there was an equivalent decrease in these enrolments.

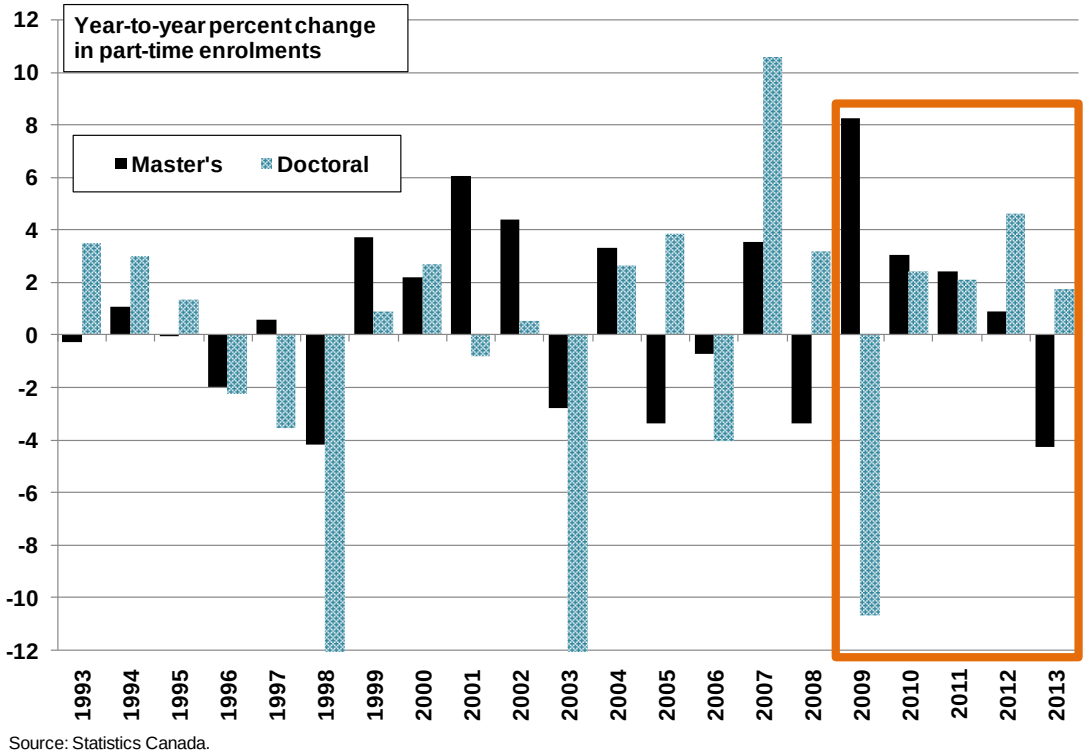
This first section of the report has highlighted some of the patterns in part-time enrolments. However, as was the case in the Statistical Report, the bulk of this 42nd Report will focus on full-time enrolments.

Figure 1.3 - Part-time Master's and doctoral enrolments, Canada, 1992-2013



Source: Statistics Canada.

Figure 1.4 - Part-time Master's and doctoral enrolments, percent annual change, 1992-2013



Source: Statistics Canada.

Table 1.2 gives the detailed numbers and annual percent change which are presented graphically in Figure 1.1 to Figure 1.4.

Table 1.2 - Full-time and part-time Master's and doctoral enrolments in Canada, 1992-2013

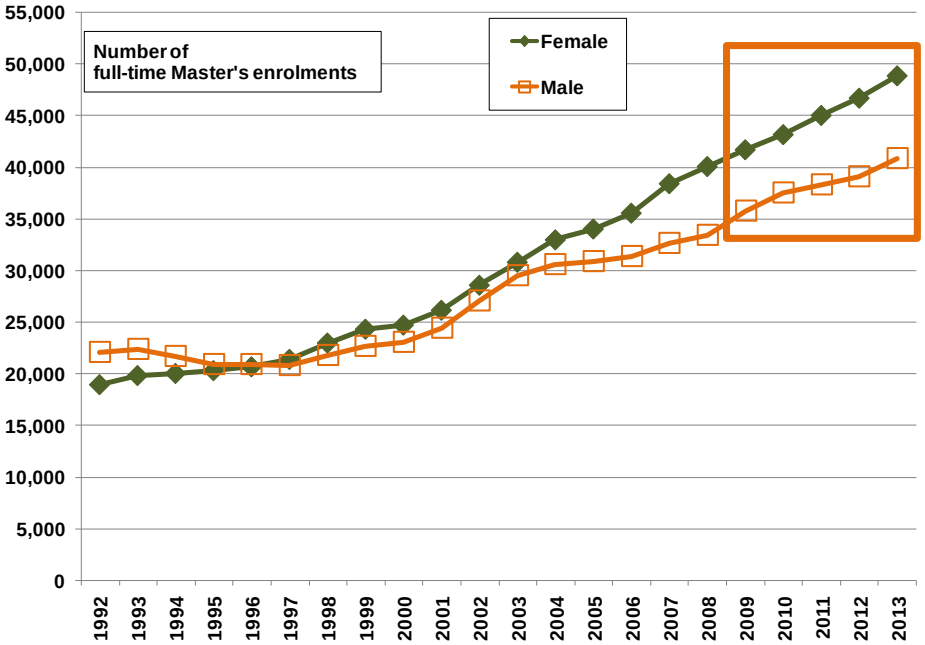
	Full-time	Full-time	Full-time	Full-time	Full-time	Full-time	Part-time	Part-time	Part-time	Part-time	Part-time	Part-time
Year	Master's enrolments - number	Master's enrolments – annual change	Master's enrolments - % annual change	Doctoral enrolments - number	Doctoral enrolments - annual change	Doctoral enrolments - % annual change	Master's enrolments-number	Master's enrolments - annual change	Master's enrolments - % annual change	Doctoral enrolments - number	Doctoral enrolments - annual change	Doctoral enrolments - % annual change
1992	40,989			20,910			27,873			4,203		
1993	42,156	1,167	2.8	22,122	1,212	5.8	27,786	-87	-0.3	4,350	147	3.5
1994	41,700	-456	-1.1	22,665	543	2.5	28,083	297	1.1	4,479	129	3.0
1995	41,223	-477	-1.1	22,764	99	0.4	28,074	-9	0.0	4,539	60	1.3
1996	41,583	360	0.9	22,758	-6	0.0	27,510	-564	-2.0	4,437	-102	-2.2
1997	42,189	606	1.5	22,722	-36	-0.2	27,660	150	0.5	4,278	-159	-3.6
1998	44,796	2,607	6.2	23,724	1,002	4.4	26,499	-1,161	-4.2	2,781	-1,497	-35.0
1999	46,935	2,139	4.8	23,676	-48	-0.2	27,480	981	3.7	2,805	24	0.9
2000	47,760	825	1.8	23,727	51	0.2	28,080	600	2.2	2,880	75	2.7
2001	50,574	2,814	5.9	24,621	894	3.8	29,775	1,695	6.0	2,856	-24	-0.8
2002	55,638	5,064	10.0	26,595	1,974	8.0	31,080	1,305	4.4	2,871	15	0.5
2003	60,297	4,659	8.4	29,874	3,279	12.3	30,207	-873	-2.8	2,280	-591	-20.6
2004	63,591	3,294	5.5	32,511	2,637	8.8	31,200	993	3.3	2,340	60	2.6
2005	64,875	1,284	2.0	34,455	1,944	6.0	30,144	-1,056	-3.4	2,430	90	3.8
2006	66,966	2,091	3.2	36,723	2,268	6.6	29,925	-219	-0.7	2,331	-99	-4.1
2007	71,034	4,068	6.1	38,601	1,878	5.1	30,981	1,056	3.5	2,577	246	10.6
2008	73,494	2,460	3.5	40,260	1,659	4.3	29,931	-1,050	-3.4	2,658	81	3.1
2009	77,484	3,990	5.4	43,158	2,898	7.2	32,394	2,463	8.2	2,373	-285	-10.7
2010	80,715	3,231	4.2	45,102	1,944	4.5	33,378	984	3.0	2,430	57	2.4
2011	83,409	2,694	3.3	46,782	1,680	3.7	34,176	798	2.4	2,481	51	2.1
2012	85,809	2,400	2.9	48,006	1,224	2.6	34,470	294	0.9	2,595	114	4.6
2013	89,733	3,924	4.6	48,726	720	1.5	32,991	-1479	-4.3	2,640	45	1.7

Source: Statistics Canada

1.7 Full-time and part-time enrolments by Gender

As indicated above, this report will pay particular attention to gender issues, exploring it a bit more detail than was done in the 41st Statistical Report. The first stage is to examine the patterns of graduate enrolments for males and females.

Figure 1.5 – Full-time Master's enrolments by gender, 1992-2013



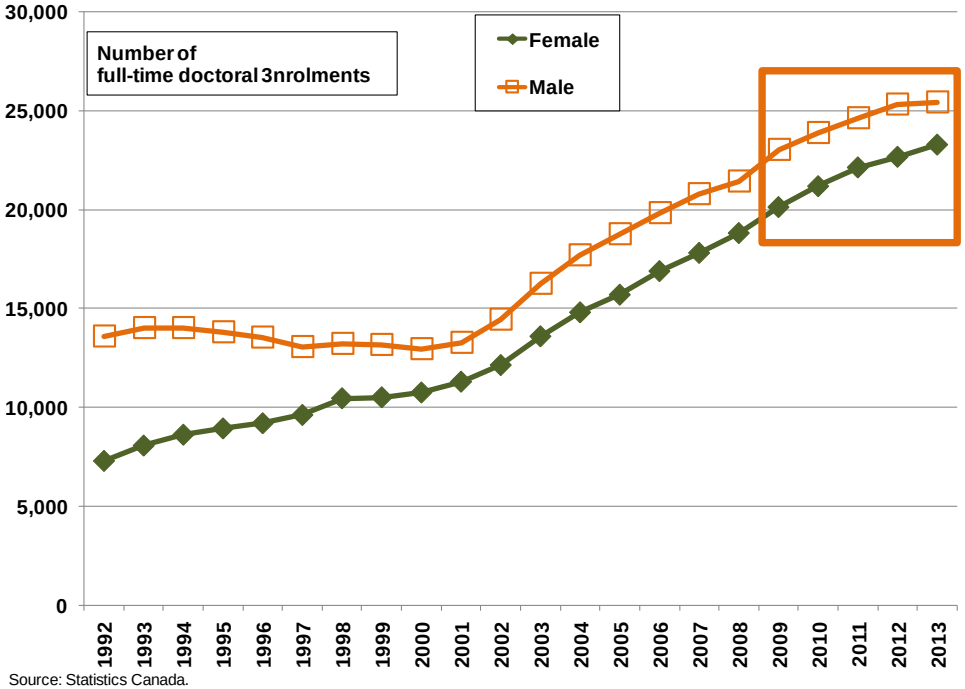
Source: Statistics Canada.

Figure 1.5 and Figure 1.6 present the relevant trends in full-time enrolments by gender, over time. The numbers of full-time and part-time graduate enrolments, by gender, are given in Table 1.2.

It is important to note that the number of full-time enrolments by males (as well as the number of full-time enrolments by females) has been increasing since 1997. While the *percentage* of females among full-time Master's enrolments has been more than 50% since 1996, this does not mean that fewer males are enrolling. Rather the number of females has been increasing faster than the increase in the number of males. Further, the percentage of females versus males among full-time Master's enrolments has not increased in the last five years for which we have data. It was 54% in 2009, and has been 53% or 54% in all years from 2009 to 2013. See Table 1.3.

Note that, without exception, the percent female is higher among part-time than among full-time enrolments in every year from 1992 to 2013. Compare the rows for full-time versus part-time among Master's and doctoral enrolments in Table 1.3, below.

Figure 1.6 – Full-time doctoral enrolments by gender, 1992-2013



Source: Statistics Canada.

The picture is different among full-time doctoral enrolments. There, while the number of females has been steadily increasing from 1992 to 2013, the number of males has also been increasing. The percentage that females make up of full-time doctoral enrolments has been at about 47% since 2008.

Table 1.3 – Full-time and part-time Master's and doctoral enrolments by gender, 1992-2013

		Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Full-time	Master's	Male	22,068	22,356	21,693	20,946	20,937	20,817	21,840	22,641	23,070	24,447	27,087	29,514	30,636	30,864	31,404	32,643	33,441	35,805	37,560	38,391	39,129	40,890
		Female	18,921	19,803	20,007	20,277	20,649	21,375	22,953	24,294	24,687	26,127	28,551	30,777	32,946	33,993	35,529	38,382	40,044	41,667	43,134	44,991	46,662	48,825
	Doctoral	Male	13,605	14,037	14,037	13,818	13,548	13,092	13,251	13,158	12,966	13,311	14,445	16,272	17,697	18,750	19,821	20,784	21,444	23,025	23,910	24,651	25,329	25,434
		Female	7,308	8,082	8,631	8,949	9,210	9,630	10,473	10,521	10,764	11,310	12,150	13,602	14,814	15,705	16,896	17,817	18,819	20,130	21,186	22,134	22,671	23,286
Part-time	Master's	Male	12,993	12,852	12,888	12,726	12,357	12,384	12,000	12,597	12,786	13,887	14,301	13,845	14,121	13,257	12,678	13,047	12,294	13,167	13,458	13,845	13,929	13,227
		Female	14,880	14,931	15,192	15,351	15,153	15,276	14,496	14,883	15,291	15,879	16,779	16,362	17,070	16,878	17,244	17,931	17,625	19,200	19,908	20,316	20,526	19,749
	Doctoral	Male	2,412	2,466	2,520	2,502	2,397	2,328	1,491	1,515	1,512	1,494	1,488	1,137	1,188	1,224	1,179	1,335	1,374	1,218	1,284	1,260	1,299	1,323
		Female	1,788	1,887	1,962	2,037	2,040	1,953	1,290	1,290	1,365	1,362	1,383	1,143	1,152	1,203	1,155	1,242	1,281	1,152	1,149	1,221	1,293	1,320

Source: Statistics Canada

This table also shows the pattern, reported in the 41st Statistical Report, that there were more females than males among full-time Master's enrolments, from 1997, on. In no year from 1992 to 2013 were there more females than males among full-time doctoral enrolments.

As indicated, above, there are issues with the figures for part-time enrolments, since they tend to shift, depending on administrative definitions of full- and part-time studies. Also, certain disciplines tend to have heavier concentrations of part-time enrolments. With this caution, the relevant information on both full-time and part-time graduate enrolments is included in Table 1.4, which gives the percent female of relevant graduate enrolments in a given year.

Females have made up more than 50% of part-time Master's enrolments every year since 1992, the first year for which we have data. For most of the years from 2005 to 2013, females were at or near 50% of the part-time doctoral enrolments.

Table 1.4 - Full-time and part-time Master's and doctoral enrolments, percent female, 1992-2013

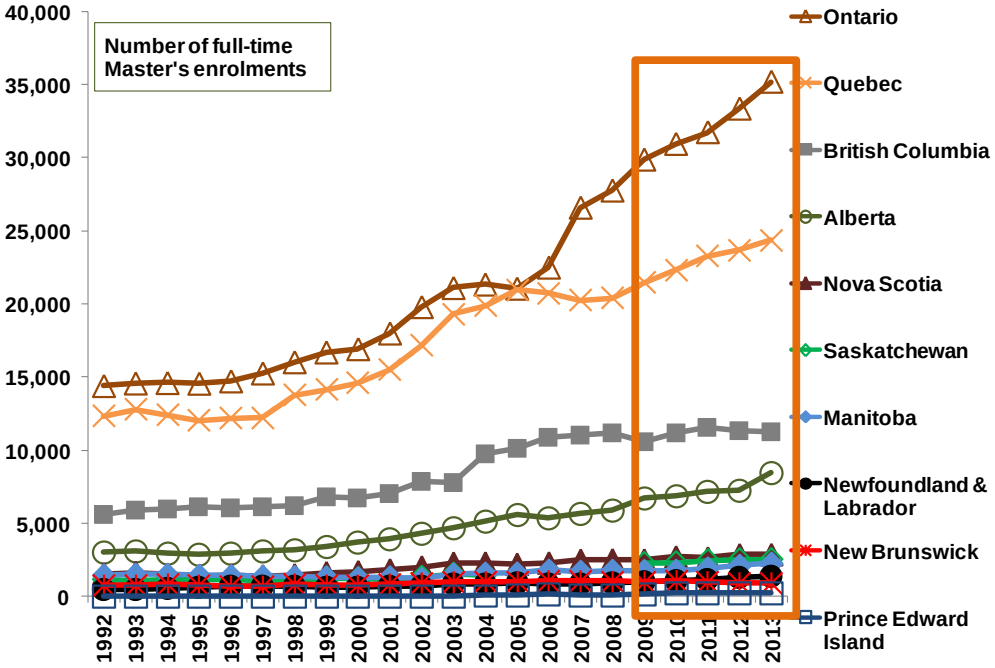
	Percent female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Full-time	Master's	46.2	47.0	48.0	49.2	49.7	50.7	51.2	51.8	51.7	51.7	51.3	51.0	51.8	52.4	53.1	54.0	54.5	53.8	53.4	53.9	54.4	54.4
	Doctoral	34.9	36.5	38.1	39.3	40.5	42.4	44.1	44.4	45.4	45.9	45.7	45.5	45.6	45.6	46.0	46.2	46.7	46.6	47.0	47.3	47.2	47.8
Part-time	Master's	53.4	53.7	54.1	54.7	55.1	55.2	54.7	54.2	54.5	53.3	54.0	54.2	54.7	56.0	57.6	57.9	58.9	59.3	59.6	59.4	59.5	59.9
	Doctoral	42.5	43.4	43.8	44.9	46.0	45.7	46.4	46.0	47.4	47.7	48.2	50.1	49.2	49.5	49.5	48.2	48.2	48.5	47.3	49.2	49.8	50.0

Source: Statistics Canada

1.8 Full-time enrolments by Province

Given that education is a provincial jurisdiction in Canada, trends by province are of particular interest. As we saw in the 41st Statistical Report, the increases in full-time graduate enrolments were largely driven by increases in these enrolments in Ontario, Quebec and British Columbia, the provinces that also have had the largest numbers of full-time graduate enrolments. See Figure 1.7.

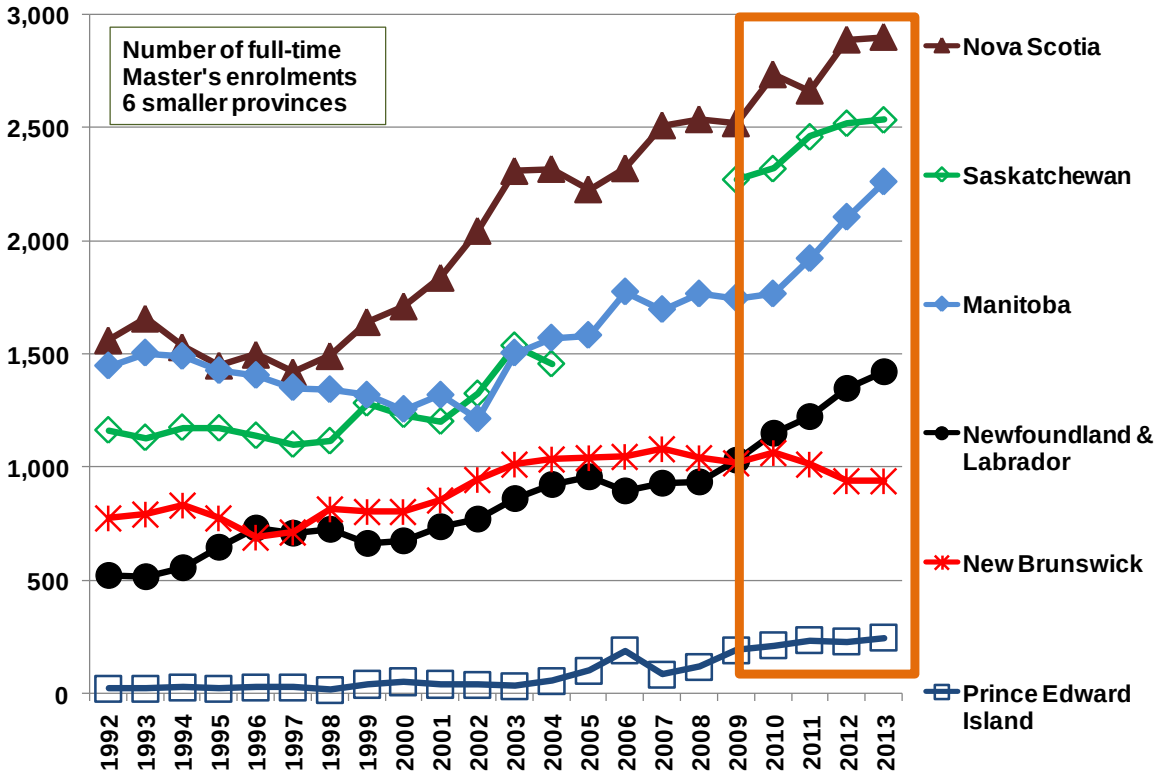
Figure 1.7 – Full-time Master's enrolments by province, 1992-2013



Note: Saskatchewan data are not shown for 2005 to 2008 due to the lack of data from the University of Regina.
Source: Statistics Canada.

This pattern of increase in the provinces with the largest enrolments is continued over the most recent five years, from 2009 to 2013 (the boxed area of the graph). Ontario increased from 29,910 to 35,229 full-time Master's enrolments in that time period. Quebec went from 21,489 to 24,399 in the same time period. While Manitoba increased little, Alberta's numbers of full-time Master's enrolments went from 6,707 to 8,478 in those five years.

Figure 1.8 – Full-time Master's enrolments by province, six smaller provinces, 1992-2013



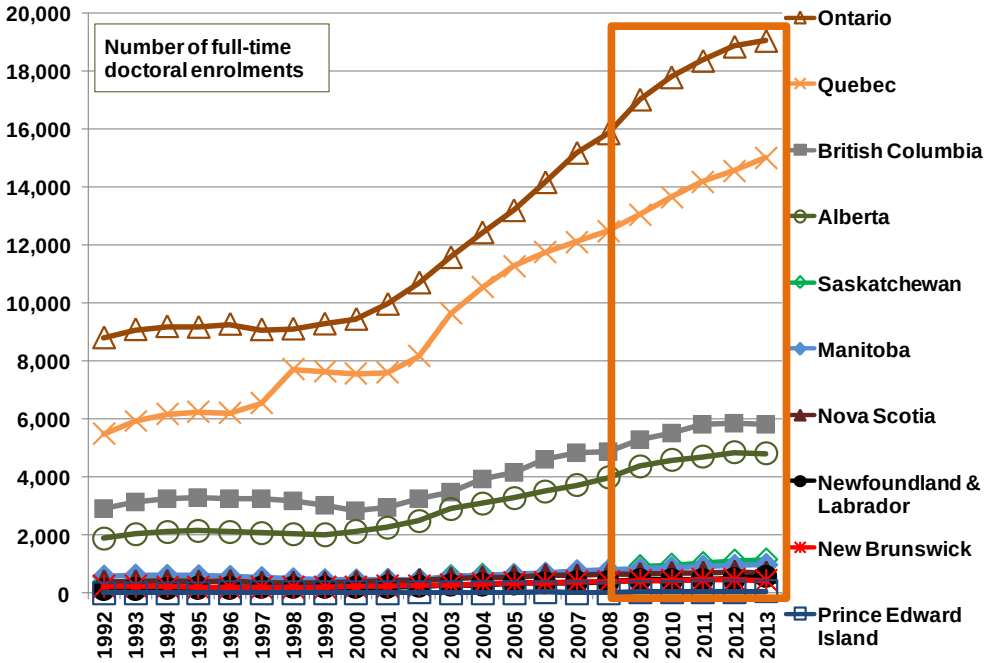
Note: Saskatchewan data are not shown for 2005 to 2008 due to the lack of data from the University of Regina.
Source: Statistics Canada.

Figure 1.8 shows a bit more detail for the six smaller provinces. Here it is evident that there were also increases in the full-time Master's enrolments in Nova Scotia, Saskatchewan and Newfoundland and Labrador from 2009 to 2013. Prince Edward Island (PEI) edged up from 192 enrolments to 246 in that same time period. Only New Brunswick showed a downturn in the last five years for which we have data.

Looking at full-time doctoral enrolments by province shows a similar pattern to the one for Master's enrolments: there has been an increase in recent years in all provinces, large and small, with the exception of New Brunswick. (See Figure 1.9 and Figure 1.10.)

Again, the numeric increase in full-time enrolments is most pronounced in Ontario (from 17,034 in 2009 to 19,062 in 2013) and Quebec (from 13,071 to 15,033 in the same time period).

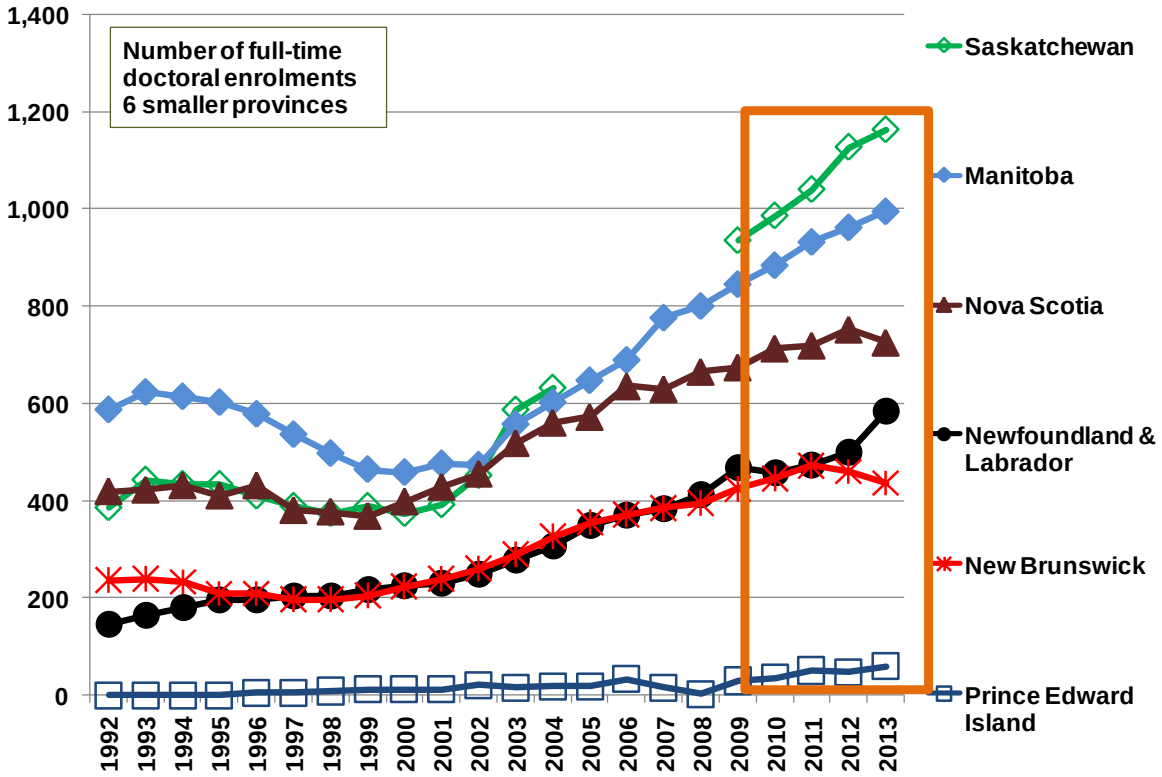
Figure 1.9 – Full-time doctoral enrolments by province, 1992-2013



Note: Saskatchewan data are not shown for 2005 to 2008 due to the lack of data from the University of Regina.
Source: Statistics Canada.

While the numbers are smaller in the smaller provinces, there was an increase in full-time graduate enrolments for all of them in the period 2009 to 2013, except for the downturn in New Brunswick from 2011 to 2013. Note the recent downturn in Nova Scotia in 2013, with 726 full-time doctoral enrolments in 2013; down from 753 in 2012. (See Figure 1.10.)

Figure 1.10 - Full-time doctoral enrolments by province, six smaller provinces 1992-2013



Note: Saskatchewan data are not shown for 2005 to 2008 due to the lack of data from the University of Regina.
Source: Statistics Canada.

1.9 Full-time enrolments by Province and Gender

This next section looks at the full-time graduate enrolments by province and gender. First Table 1.5 and Table 1.6 show the numbers by gender, percent female, and the change from 1993 to 2003 and 2013. In every province except New Brunswick, there was a larger increase in Master's enrolments from 1993 to 2003 (numerically and percentage increase) for females than males.

Table 1.5 Full-time Master's enrolments by gender and province, 1993, 2003, 2013

		Gender				% female	% female	% female	Change	% change	Change	% change
		Year	1993	2003	2013	1993	2003	2013	1993-2013	1993-2013	2003-2013	2003-2013
Master's	Canada	Male	22,356	29,514	40,890				18,534	82.9	11,376	38.5
		Female	19,803	30,777	48,825	47.0	51.0	54.4	29,022	146.6	18,048	58.6
	Newfoundland & Labrador	Male	279	387	717				438	157.0	330	85.3
		Female	234	468	702	45.6	54.7	49.5	468	200.0	234	50.0
	Prince Edward Island	Male	12	12	87				75	625.0	75	625.0
		Female	12	21	162	50.0	63.6	65.1	150	1250.0	141	671.4
	Nova Scotia	Male	825	1,128	1,353				528	64.0	225	19.9
		Female	834	1,182	1,551	50.3	51.2	53.4	717	86.0	369	31.2
	New Brunswick	Male	423	546	516				93	22.0	-30	-5.5
		Female	375	471	426	47.0	46.3	45.2	51	13.6	-45	-9.6
	Quebec	Male	6,834	9,591	11,313				4,479	65.5	1,722	18.0
		Female	6,024	9,744	13,086	46.9	50.4	53.6	7,062	117.2	3,342	34.3
	Ontario	Male	7,884	10,575	16,365				8,481	107.6	5,790	54.8
		Female	6,738	10,566	18,855	46.1	50.0	53.5	12,117	179.8	8,289	78.4
	Manitoba	Male	861	690	969				108	12.5	279	40.4
		Female	648	816	1,293	42.9	54.2	57.2	645	99.5	477	58.5
	Saskatchewan	Male	684	738	1,155				471	68.9	417	56.5
		Female	447	798	1,383	39.5	52.0	54.5	936	209.4	585	73.3
	Alberta	Male	1,548	2,355	3,696				2,148	138.8	1,341	56.9
		Female	1,581	2,340	4,776	50.5	49.8	56.4	3,195	202.1	2,436	104.1
	British Columbia	Male	3,006	3,492	4,722				1,716	57.1	1,230	35.2
		Female	2,916	4,365	6,591	49.2	55.6	58.3	3,675	126.0	2,226	51.0

Source: Statistics Canada

Among full-time doctoral enrolments all provinces, without exception, have a larger increase in the number and percentage of females than males in 2013 compared to 1993. See Table 1.6. Note that in all provinces (except PEI which had no full-time doctoral enrolments in 1993) the number of females enrolled full-time in doctoral programs increased from 1993 to 2013 by more than 100%.

Table 1.6 Full-time doctoral enrolments by gender and province, 1993, 2003, 2013

		Gender				% female	% female	% female	Change	% change	Change	% change
		Year	1993	2003	2013	1993	2003	2013	1993-2013	1993-2013	2003-2013	2003-2013
Doctoral	Canada	Male	14,037	16,272	25,434				11,397	81.2	9,162	56.3
		Female	8,082	13,602	23,286	36.5	45.5	47.8	15,204	188.1	9,684	71.2
	Newfoundland and Labrador	Male	123	147	330				207	168.3	183	124.5
		Female	42	132	258	25.5	47.3	43.9	216	514.3	126	95.5
	Prince Edward Island	Male	0	9	27				27	0	18	200.0
		Female	0	9	33	0.0	50.0	55.0	33	0	24	266.7
	Nova Scotia	Male	264	300	417				153	58.0	117	39.0
		Female	156	219	312	37.1	42.2	42.8	156	100.0	93	42.5
	New Brunswick	Male	174	147	222				48	27.6	75	51.0
		Female	66	147	216	27.5	50.0	49.3	150	227.3	69	46.9
	Quebec	Male	3,828	5,238	7,755				3,927	102.6	2,517	48.1
		Female	2,112	4,410	7,278	35.6	45.7	48.4	5,166	244.6	2,868	65.0
	Ontario	Male	5,625	6,297	9,987				4,362	77.5	3,690	58.6
		Female	3,480	5,295	9,069	38.2	45.7	47.6	5,589	160.6	3,774	71.3
	Manitoba	Male	411	330	501				90	21.9	171	51.8
		Female	213	228	495	34.1	40.9	49.7	282	132.4	267	117.1
	Saskatchewan	Male	336	339	633				297	88.4	294	86.7
		Female	111	246	528	24.8	42.1	45.5	417	375.7	282	114.6
	Alberta	Male	1,305	1,596	2,598				1,293	99.1	1,002	62.8
		Female	732	1,299	2,229	35.9	44.9	46.2	1,497	204.5	930	71.6
	British Columbia	Male	1,971	1,872	2,967				996	50.5	1,095	58.5
		Female	1,176	1,617	2,865	37.4	46.3	49.1	1,689	143.6	1,248	77.2

Source: Statistics Canada

Table 1.7 provides the more detailed information on the percent female by province. (The "Canada" rows in this table repeat the information on full-time enrolments from Table 1.4, for comparison with the provincial numbers.)

Table 1.7 –Full-time Master's and doctoral enrolments by province, percent female, 1992-2013

% female	Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Master's	Canada	46.2	47.0	48.0	49.2	49.7	50.7	51.2	51.8	51.7	51.7	51.3	51.0	51.8	52.4	53.1	54.0	54.5	53.8	53.5	54.0	54.4	54.4
	Newfoundland & Labrador	44.8	45.6	51.6	50.2	49.8	51.7	55.8	56.4	57.3	55.3	55.5	54.7	55.5	56.6	54.2	53.7	52.1	53.2	53.1	51.0	50.4	49.5
	Prince Edward Island	44.4	50.0	55.6	50.0	60.0	60.0	83.3	71.4	66.7	71.4	71.4	63.6	63.2	62.9	75.8	70.4	65.9	56.3	56.9	64.1	64.5	65.1
	Nova Scotia	48.9	50.3	51.9	51.0	51.8	53.3	53.8	56.0	53.1	50.8	51.5	51.2	50.5	53.2	56.5	57.6	57.6	55.2	55.3	55.1	53.3	53.4
	New Brunswick	42.1	47.0	46.2	47.5	47.4	49.2	50.4	48.9	47.9	47.7	46.5	46.3	47.4	49.3	49.7	47.9	48.6	48.5	47.2	46.4	47.8	45.2
	Quebec	46.7	46.9	48.9	49.8	50.5	50.9	51.5	52.1	51.6	51.6	50.7	50.4	51.0	51.1	51.9	52.8	52.8	52.0	52.3	52.9	53.3	53.6
	Ontario	45.5	46.1	46.3	48.0	48.3	48.8	49.4	50.1	50.5	50.6	50.3	50.0	51.6	53.2	53.2	53.9	54.6	53.8	53.3	53.3	53.8	53.5
	Manitoba	41.0	42.9	44.6	45.5	50.2	51.1	50.7	50.2	51.3	51.8	52.6	54.2	55.4	55.6	58.2	59.5	58.1	57.6	57.6	56.2	57.3	57.2
	Saskatchewan	37.5	39.5	42.3	43.5	43.7	46.4	45.0	47.1	49.0	52.6	52.5	52.0	50.5	50.0	50.0	50.0	55.2	55.0	55.6	54.9	55.4	54.5
	Alberta	48.9	50.5	51.9	52.2	51.8	52.1	52.4	52.5	50.5	49.7	49.1	49.8	50.8	49.8	50.8	53.1	52.8	52.0	51.6	54.5	55.6	56.4
	British Columbia	48.5	49.2	49.1	51.0	50.7	54.1	54.7	54.7	55.4	55.6	56.1	55.6	54.3	54.4	54.8	56.4	57.5	57.7	56.4	57.5	57.9	58.3
Doctoral	Canada	34.9	36.5	38.1	39.3	40.5	42.4	44.1	44.4	45.4	45.9	45.7	45.5	45.6	45.6	46.0	46.2	46.7	46.6	47.0	47.3	47.2	47.8
	Newfoundland and Labrador	24.5	25.5	28.3	30.3	31.8	39.7	42.6	40.5	41.3	44.2	44.6	47.3	46.6	47.9	50.0	46.9	44.2	43.2	42.9	44.6	43.1	43.9
	Prince Edward Island*	0.0	0.0	0.0	0.0	50.0	33.3	25.0	50.0	66.7	50.0	42.9	50.0	57.1	42.9	40.0	40.0	50.0	60.0	61.5	64.7	53.3	55.0
	Nova Scotia	35.7	37.1	37.5	39.4	40.3	43.7	44.8	42.3	44.7	41.7	42.8	42.2	43.3	47.4	48.1	46.0	45.0	45.3	42.9	43.3	42.9	42.8
	New Brunswick	26.9	27.5	30.4	31.0	35.2	39.4	43.9	47.1	46.7	48.1	50.6	50.0	46.3	47.5	47.2	47.3	47.4	47.2	47.0	47.5	49.0	49.3
	Quebec	33.6	35.6	36.3	37.2	38.7	41.4	44.2	45.0	45.5	46.0	45.7	45.7	46.4	46.3	46.5	47.0	47.4	47.6	47.8	48.2	48.0	48.4
	Ontario	36.4	38.2	40.2	41.7	42.8	43.8	45.2	45.2	45.6	45.9	45.8	45.7	45.4	45.4	46.1	46.3	46.9	46.6	47.2	47.4	47.3	47.6
	Manitoba	32.1	34.1	35.6	36.3	36.8	37.6	40.4	40.9	41.2	43.4	41.1	40.9	42.5	40.7	39.8	43.2	45.3	47.0	48.0	48.2	48.3	49.7
	Saskatchewan	26.2	24.8	23.6	27.1	26.8	31.5	34.1	37.7	40.0	40.5	42.1	42.1	42.2	42.4	42.4	42.4	45.9	44.6	43.5	45.1	46.7	45.5
	Alberta	34.4	35.9	39.1	40.3	41.5	43.4	43.7	43.4	45.6	46.5	45.0	44.9	43.4	43.9	44.1	44.2	44.8	43.6	44.5	45.1	45.1	46.2
	British Columbia	36.1	37.4	38.1	39.3	39.7	42.1	43.0	43.3	45.7	47.5	46.9	46.3	46.5	46.3	46.5	45.9	46.8	47.5	47.6	47.5	47.6	49.1

Source: Statistics Canada . * Note: there were no doctoral enrolments in Prince Edward Island prior to 1997.

It is interesting to note that, while more than 50% of Master's enrolments have been by females, Canada wide, since 1996, the percent female in New Brunswick only reaches 50% in one the years 1992-2013, in 1998. Manitoba and British Columbia have for some time, and certainly in the last five years for which we have data, had a higher percentage of females among full-time Master's enrolments

than the national pattern.

There is less of a clear pattern in the percent female among full-time doctoral enrolments. Newfoundland and Labrador tend to be lower than the Canadian average, although that is not the case from 2003-2006. Probably the most noteworthy finding in the bottom section of Table 1.7 is the consistency in the patterns. For all provinces, and therefore for Canada as a whole, the percent female has been rising fairly consistently since 1992. And, the only provinces in which it ever reached 50% were New Brunswick, in 2002 and 2003, and Newfoundland and Labrador in 2006. (The percentages for Prince Edward Island bounce around and sometimes exceed 50% but they are based on very small numbers. In 2013 there were 27 males and 33 females enrolled in doctoral programs in Prince Edward Island.)

Given that there are important differences in enrolments by males and females in different fields of study some, if not much, of the variation in the percentage female evident in graduate enrolments is likely due to the introduction, deletion, expansion and contraction of specific fields of study in particular provinces. (Keep in mind that in some provinces, there is one university, or one university which offers most if not all of the graduate programs.) The next section of this report will examine trends in fields of study.

1.10 Full-time enrolments by Main Field of Study

As noted in the Methodological Notes, above, one must be cautious in comparing the absolute size of particular fields of study, since the size of a field reflects the number of specific disciplines included in the field. Some of these categorizations and combinations are arbitrary. That said, we can consider how particular fields of study have expanded or contracted over time. Figure 1.11 and Figure 1.12 provide the relevant information.

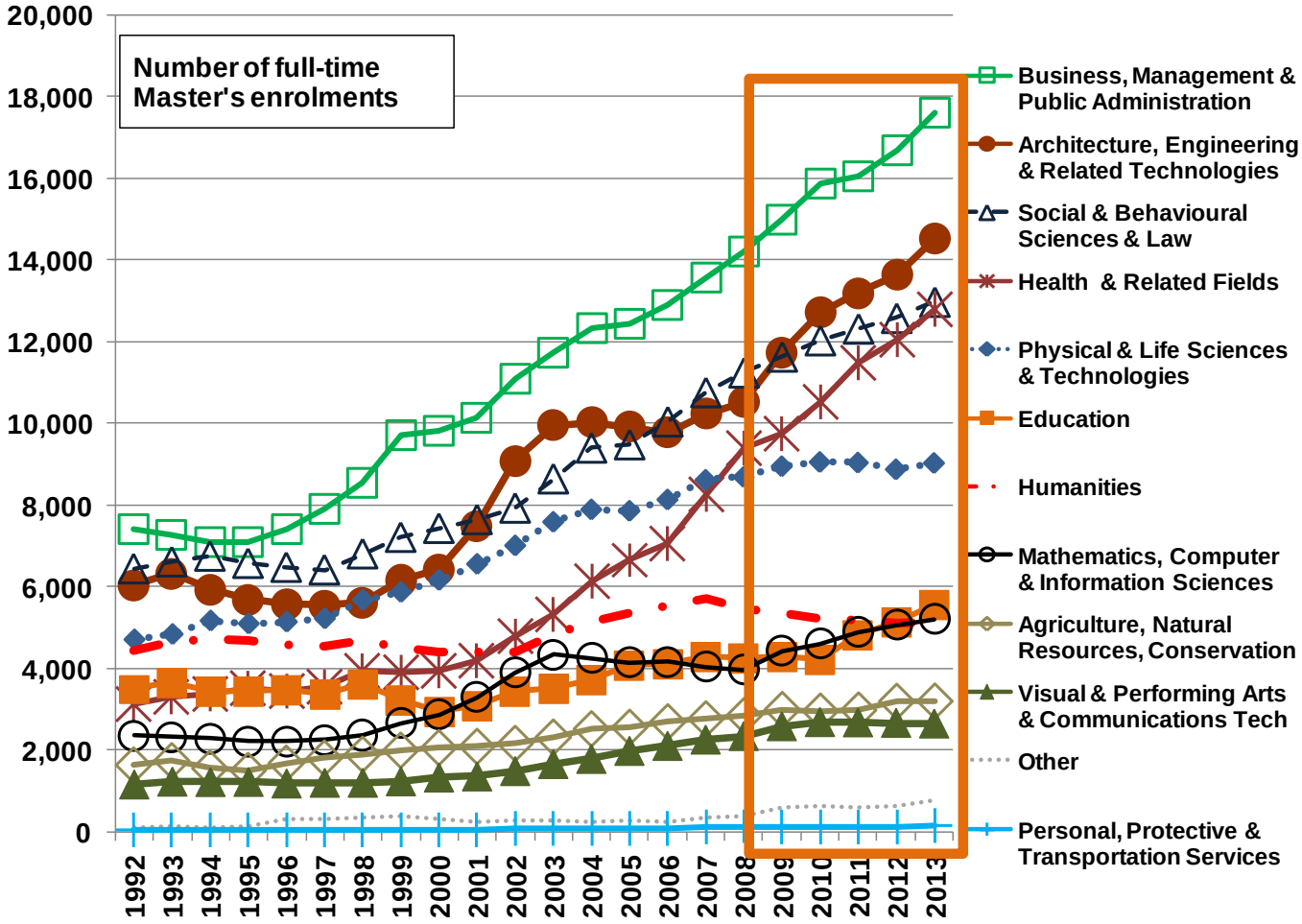
As was evident in the 41st Statistical Report certain fields of study show large increases over time. Those with high numbers in full-time Master's enrolments, especially in the years 2009 to 2013, are:

- Business, Management, and Public Administration,
- Architecture, Engineering and Related Technologies,
- Social and Behavioural Sciences and Law,
- Health and Related Fields, and
- Physical and Life Sciences and Technologies.

As Table 1.8 shows, (apart from "Other" which is hard to interpret), the fields with the largest percentage increases in full-time Master's enrolments from 1993 to 2013 are:

- Personal, Protective & Transportation Services (which has very low numbers) (336%),
- Health and Related Fields (290%) and
- Business, Management and Public Administration (142%).

Figure 1.11 - Full-time Master's enrolments by main field of study, 1992-2013



Source: Statistics Canada.

Table 1.8 – Full-time Master's enrolments by main field of study, numbers and change, 1993, 2003, 2013

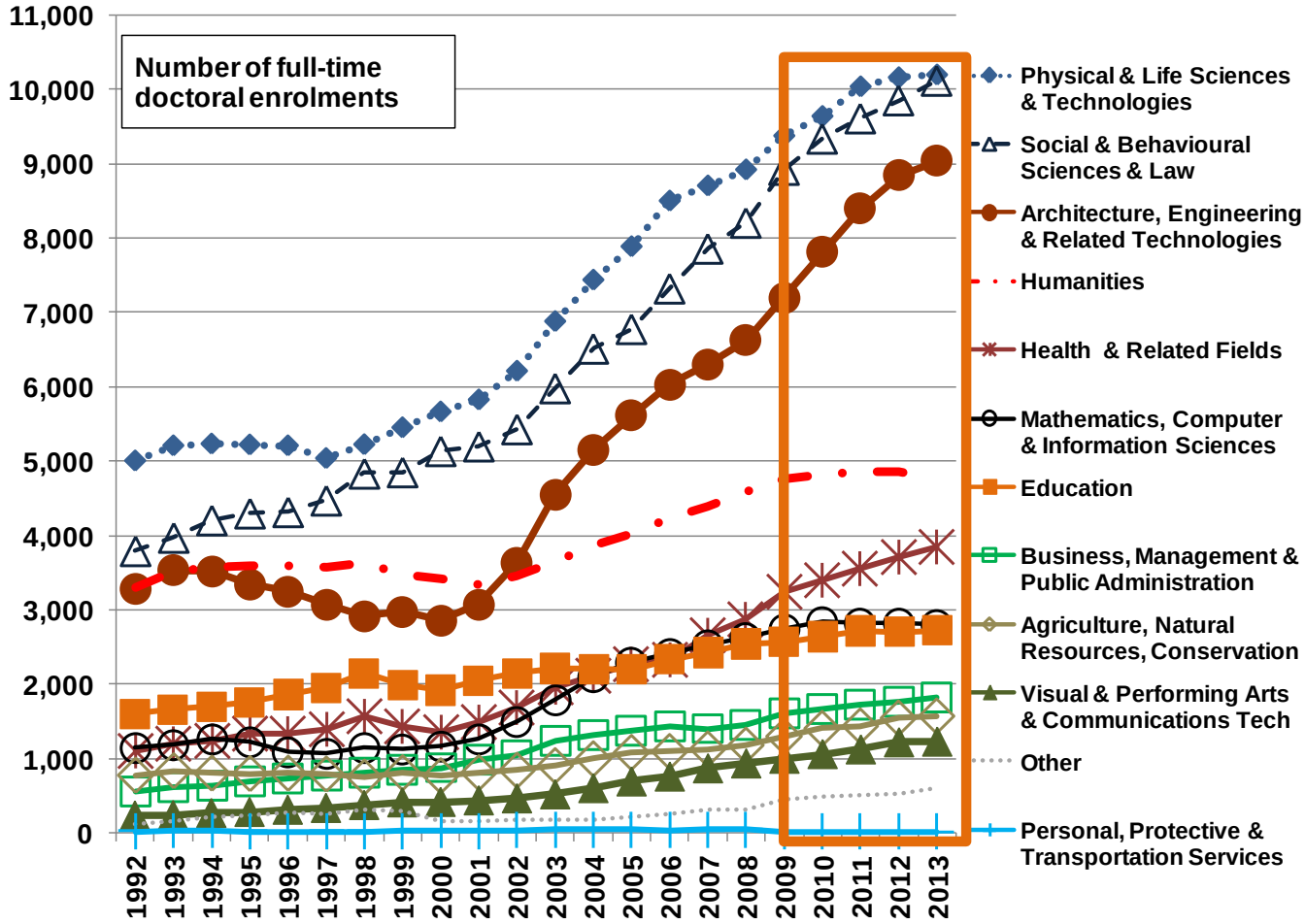
Master's				Change	% change	Change	% change
Year	1993	2003	2013	1993-2013	1993-2013	2003-2013	2003-2013
Canada	42,156	60,297	89,733	47,577	112.9	29,436	48.8
Agriculture, Natural Resources, Conservation	1,743	2,322	3,204	1,461	83.8	882	38.0
Architecture, Engineering & Related Technologies	6,339	9,957	14,535	8,196	129.3	4,578	46.0
Business, Management & Public Administration	7,281	11,733	17,613	10,332	141.9	5,880	50.1
Education	3,639	3,519	5,571	1,932	53.1	2,052	58.3
Health & Related Fields	3,285	5,301	12,801	9,516	289.7	7,500	141.5
Humanities	4,656	4,824	5,169	513	11.0	345	7.2
Mathematics, Computer & Information Sciences	2,337	4,347	5,211	2,874	123.0	864	19.9
Personal, Protective & Transportation Services	33	69	144	111	336.4	75	108.7
Physical & Life Sciences & Technologies	4,857	7,608	9,051	4,194	86.3	1,443	19.0
Social & Behavioural Sciences & Law	6,615	8,652	12,984	6,369	96.3	4,332	50.1
Visual & Performing Arts & Communications Tech	1,233	1,668	2,667	1,434	116.3	999	59.9
Other	135	294	783	648	480.0	489	166.3

Source: Statistics Canada

The main fields of study with the largest number of full-time doctoral enrolments, and some of the largest increases in these enrolments over time (See Figure 1.12.) are:

- Physical and Life Sciences and Technologies,
- Social and Behavioural Sciences and Law,
- Architecture, Engineering and Related Technologies, and
- Humanities. Note that in the years 2009 to 2013 full-time doctoral enrolments have fallen off in the Humanities; they have increased for Health and Related Fields.

Figure 1.12 - Full-time doctoral enrolments by main field of study, 1992-2013



Source: Statistics Canada.

The main fields of study with the largest percentage increase in full-time doctoral enrolments, from 1993 to 2013 (see Table 1.19) were:

- Visual and Performing Arts and Communications Technologies (407%),
- Health and Related Fields (219%), and
- Business, Management and Public Administration (201%)
- (as well as "Other" with a 285% increase).

Table 1.9 – Full-time doctoral enrolments by main field of study, numbers and change, 1993, 2003, 2013

Doctoral				Change	% change	Change	% change
Year	1993	2003	2013	1993-2013	1993-2013	2003-2013	2003-2013
Canada	22,122	29,874	48,726	26,604	120.3	18,852	63.1
Agriculture, Natural Resources, Conservation	828	897	1,572	744	89.9	675	75.3
Architecture, Engineering & Related Technologies	3,525	4,545	9,039	5,514	156.4	4,494	98.9
Business, Management & Public Administration	606	1,230	1,824	1,218	201.0	594	48.3
Education	1,662	2,208	2,718	1,056	63.5	510	23.1
Health & Related Fields	1,203	1,950	3,840	2,637	219.2	1,890	96.9
Humanities	3,519	3,651	4,761	1,242	35.3	1,110	30.4
Mathematics, Computer & Information Sciences	1,182	1,791	2,796	1,614	136.5	1,005	56.1
Personal, Protective & Transportation Services	27	36	15	-12	-44.4	-21	-58.3
Physical & Life Sciences & Technologies	5,205	6,879	10,200	4,995	96.0	3,321	48.3
Social & Behavioural Sciences & Law	3,972	5,985	10,128	6,156	155.0	4,143	69.2
Visual & Performing Arts & Communications Tech	243	522	1,233	990	407.4	711	136.2
Other	156	171	600	444	284.6	429	250.9

Source: Statistics Canada

1.11 Full-time enrolments by Detailed Field of Study

The next two tables,

Table 1.10 and Table 1.11, show the shift over time in the more detailed fields of study. One should remember the caveat that the classification of sub-fields into a particular field of study is, to some extent, arbitrary so the "size" of the field reflects which sub-fields are included.

With that caveat in mind, it is clear that the large area of growth was in Multi-disciplinary studies. There was a dramatic increase from 1993 to 2013 for this field (from 126 full-time Master's and 150 full-time doctoral enrolments in 1993, to 2,043 and 1,146 in 2013).

Numerically, the detailed fields of study with the largest full-time Master's enrolments in 2013 were:

- Business, management, marketing, and related support services (13,542),
- Engineering (11,772) and
- Health professions and related clinical sciences (11,472).

For full-time doctoral enrolments, the fields with the largest enrolments were:

- Engineering (8,706),
- Biological and biomedical sciences (6,087) and
- Social sciences (4,353) with
- Psychology (4,008) and
- Physical Sciences (3,963) not far behind.

Table 1.10 – Full-time Master's enrolments by detailed field of study, 1993, 2003, 2013, ranked by percent change 1993 to 2013

Master's enrolments	Number 1993	Number 2003	Number 2013	Change 1993 - 2003	Change 2003-2013	Change 1993-2013	% change 1993-2013
Total, all fields	42,156	60,297	89,733	18,141	29,436	47,577	112.9
Multi/interdisciplinary studies	126	750	2,043	624	1,293	1,917	1,521.4
Liberal arts and sciences, general studies, and humanities	18	63	192	45	129	174	966.7
Other instructional program	42	120	318	78	198	276	657.1
Health professions and related clinical sciences	2,037	4,011	11,472	1,974	7,461	9,435	463.2
Communication, journalism, and related programs	372	705	1,344	333	639	972	261.3
Area, ethnic, cultural, and gender studies	204	384	669	180	285	465	227.9
Computer and information sciences and support services	984	2,583	2,967	1,599	384	1,983	201.5
Psychology	1,071	1,488	2,790	417	1,302	1,719	160.5
Public administration and services	1,563	2,016	4,068	453	2,052	2,505	160.3
Business, management, marketing, and related support services	5,718	9,732	13,542	4,014	3,810	7,824	136.8
Engineering	5,199	8,067	11,772	2,868	3,705	6,573	126.4
Architecture and related services	1,143	1,899	2,547	756	648	1,404	122.8
Visual and performing arts	1,233	1,668	2,625	435	957	1,392	112.9
Law, legal services, and legal studies	438	639	921	201	282	483	110.3
Natural resources and conservation	1,023	1,623	2,151	600	528	1,128	110.3
Mathematics and statistics	609	879	1,164	270	285	555	91.1
Biological and biomedical sciences	2,976	4,896	5,688	1,920	792	2,712	91.1
Parks, recreation, leisure and fitness studies	714	840	1,302	126	462	588	82.4
Physical sciences	1,860	2,436	3,063	576	627	1,203	64.7
Education	3,639	3,486	5,571	-153	2,085	1,932	53.1
Agriculture, agricultural operations, and related sciences	720	684	1,053	-36	369	333	46.3
Social sciences	4,194	4,893	5,871	699	978	1,677	40.0
Library science	741	774	936	33	162	195	26.3
French language and literature/letters	525	702	663	177	-39	138	26.3
Theological studies and religious vocations	402	606	483	204	-123	81	20.1
Family and consumer sciences/human sciences	336	303	387	-33	84	51	15.2
Foreign languages, literatures, and linguistics	777	789	813	12	24	36	4.6
History	1,002	1,002	1,032	0	30	30	3.0
Philosophy and religion	885	858	867	-27	9	-18	-2.0
English language and literature/letters	1,038	858	999	-180	141	-39	-3.8
Dental, medical and veterinary residency programs	531	483	27	-48	-456	-504	-94.9

Source: Statistics Canada

Table 1.11 - Full-time doctoral enrolments by detailed field of study, 1993, 2003, 2013, ranked by percent change 1993 to 2013

Doctoral enrolments	Number 1993	Number 2003	Number 2013	Change 1993 - 2003	Change 2003-2013	Change 1993-2013	% change 1993-2013
Total, all fields	22,122	29,874	48,726	7,752	18,852	26,604	120.3
Area, ethnic, cultural, and gender studies	36	168	429	132	261	393	1,091.7
Public administration and services	72	261	558	189	297	486	675.0
Multi/interdisciplinary studies	150	468	1,146	318	678	996	664.0
Law, legal services, and legal studies	78	279	540	201	261	462	592.3
Health professions and related clinical sciences	552	1,326	3,270	774	1,944	2,718	492.4
Other instructional program	21	12	108	-9	96	87	414.3
Visual and performing arts	243	522	1,224	279	702	981	403.7
Natural resources and conservation	246	495	954	249	459	708	287.8
Communication, journalism, and related programs	96	198	360	102	162	264	275.0
Parks, recreation, leisure and fitness studies	165	276	570	111	294	405	245.5
Liberal arts and sciences, general studies, and humanities	51	69	162	18	93	111	217.6
Computer and information sciences and support services	525	975	1,563	450	588	1,038	197.7
Theological studies and religious vocations	177	354	513	177	159	336	189.8
Psychology	1,449	2,256	4,008	807	1,752	2,559	176.6
Engineering	3,426	4,416	8,706	990	4,290	5,280	154.1
Architecture and related services	102	141	243	39	102	141	138.2
Business, management, marketing, and related support services	537	969	1,263	432	294	726	135.2
Biological and biomedical sciences	2,709	4,062	6,087	1,353	2,025	3,378	124.7
Social sciences	2,208	2,880	4,353	672	1,473	2,145	97.1
Mathematics and statistics	627	711	1,176	84	465	549	87.6
Library science	33	81	57	48	-24	24	72.7
Education	1,662	2,247	2,718	585	471	1,056	63.5
Physical sciences	2,484	2,568	3,963	84	1,395	1,479	59.5
History	678	654	969	-24	315	291	42.9
French language and literature/letters	342	396	441	54	45	99	28.9
Philosophy and religion	762	798	972	36	174	210	27.6
Agriculture, agricultural operations, and related sciences	582	402	618	-180	216	36	6.2
English language and literature/letters	771	660	816	-111	156	45	5.8
Foreign languages, literatures, and linguistics	735	720	723	-15	3	-12	-1.6
Family and consumer sciences/human sciences	108	126	96	18	-30	-12	-11.1
Dental, medical and veterinary residency programs	486	348	0	-138	-348	-486	-100.0

Source: Statistics Canada

1.12 Full-time enrolments by Field of Study and Gender

Table 1.12 –Full-time Master's and doctoral enrolments by main field of study, percent female, 1993, 2003, 2013

Percent female		Master's			Doctoral	
Year	1993	2003	2013	1993	2003	2013
All fields	47.0	51.0	54.4	36.5	45.5	47.8
Agriculture, Natural Resources, Conservation	42.7	56.5	59.1	27.9	42.8	49.4
Architecture, Engineering & Related Technologies	23.1	28.6	29.0	11.4	18.9	24.5
Business, Management & Public Administration	42.5	43.7	50.1	35.6	44.0	50.6
Education	70.5	75.3	75.1	63.1	70.4	70.4
Health & Related Fields	65.1	72.6	73.6	46.1	59.0	64.1
Humanities	51.8	56.3	56.3	47.4	50.0	48.8
Mathematics, Computer & Information Sciences	41.3	38.2	39.8	18.8	28.1	25.6
Personal, Protective & Transportation Services	9.1	26.1	42.6	25.0	25.0	40.0
Physical & Life Sciences & Technologies	41.2	52.9	51.7	29.5	41.1	45.1
Social & Behavioural Sciences & Law	54.1	62.5	65.0	49.6	58.8	62.0
Visual & Performing Arts & Communications Tech	59.5	59.4	61.8	52.4	60.9	56.3
Other	71.7	58.2	62.6	64.2	60.3	64.3

Source: Statistics Canada

Table 1.12 and Table 1.13 give the percent female over time, in (Table 1.12) main fields of study and (Table 1.13) detailed fields of study. As one would expect, there are large differences in the gender distribution in different fields of study.

Table 1.13 –Full-time Master's and doctoral enrolments by detailed field of study, percent female, 1993, 2003, 2013

	Master's			Doctoral		
	1993	2003	2013	1993	2003	2013
All fields	47.0	51.0	54.4	36.5	45.5	47.8
Agriculture, agricultural operations, and related sciences	44.6	56.4	59.5	28.0	41.0	52.4
Architecture and related services	43.8	50.1	53.1	36.4	44.7	55.6
Area, ethnic, cultural, and gender studies	59.7	74.8	72.1	45.5	62.5	68.3
Biological and biomedical sciences	47.4	58.2	57.9	38.6	47.7	52.0
Business, management, marketing, and related support services	34.9	37.6	42.4	33.7	37.8	41.9
Communication, journalism, and related programs	58.1	61.7	66.1	53.1	53.8	59.2
Computer and information sciences and support services	23.2	26.9	28.5	15.4	23.6	22.5
Dental, medical and veterinary residency programs	48.0	50.3	40.0	41.4	48.3	0.0
Education	70.5	75.7	75.1	63.1	69.9	70.4
Engineering	18.6	23.5	23.9	10.7	18.0	23.7
English language and literature/letters	61.0	65.7	66.6	56.4	63.6	59.2
Family and consumer sciences/human sciences	83.0	81.0	88.4	69.4	73.8	74.2
Foreign languages, literatures, and linguistics	66.4	70.3	68.6	55.5	59.8	59.8
French language and literature/letters	66.5	73.8	69.5	57.5	66.7	65.5
Health professions and related clinical sciences	75.8	78.5	76.1	52.2	64.2	65.6
History	42.6	49.5	46.8	40.4	43.1	45.5
Law, legal services, and legal studies	49.7	55.4	59.5	34.6	46.8	50.3
Liberal arts and sciences, general studies, and humanities	60.0	61.9	63.5	52.9	52.2	55.6
Library science	74.5	74.3	77.2	54.5	59.3	60.0
Mathematics and statistics	30.4	38.4	38.1	20.1	29.8	28.3
Multi/interdisciplinary studies	71.4	63.1	63.2	64.0	53.2	59.9
Natural resources and conservation	41.3	56.7	58.8	26.8	44.2	47.3
Parks, recreation, leisure and fitness studies	47.7	55.5	52.3	40.0	48.9	55.5
Philosophy and religion	36.1	36.4	37.0	35.3	35.5	36.7
Physical sciences	31.1	40.8	38.4	19.4	29.4	33.7
Psychology	73.0	80.4	82.0	66.3	75.5	77.5
Public administration and services	70.2	72.6	75.7	52.2	67.8	70.4
Social sciences	46.7	55.6	54.7	37.9	47.2	48.9
Theological studies and religious vocations	37.3	47.0	49.1	29.3	30.5	29.8
Visual and performing arts	59.5	59.4	62.3	52.4	60.9	56.7
Other instructional program	57.1	55.0	68.9	75.0	66.7	55.6

Main fields of study that are consistently above the Canadian average (detail for all years not shown) in terms of percent female for both Master's and doctoral full-time enrolments were:

- Education,
- Visual and Performing Arts and Communications Technologies,
- Health and Related Fields,
- Humanities, and
- Social & Behavioural Sciences and Law.

Those main fields of study which were consistently below the Canadian average in percent female for both Master's and doctoral full-time enrolments were:

- Architecture, Engineering & Related Technologies,
- Mathematics, Computer & Information Sciences and
- Personal, Protective & Transportation Services.

Table 1.12 and Figure 1.12 show the fields that tend to be increasing over time; these fields include a mix of those that are above average in the percent female and those which are below the average percent female.

Table 1.13 gives the percent female in more detailed fields of study, for 1993, 2003 and 2013. Here we see how some of the component fields contribute to the percent female in the main fields of study. Those detailed fields with the highest percent female among full-time Master's enrolments in 2013 were:

- Family and consumer sciences/human sciences (88%),
- Psychology (82%) and
- Library science (77%).
- Those with the lowest percent female among full-time Maser's enrolments that same year were:
- Engineering (24%), and
- Computer and information sciences and support services (29%).

Those fields with a high percent female in 2013 among full-time doctoral enrolments were some of the same fields:

- Psychology (78%), and
- Family and consumer sciences/human sciences (74%).

But also note the high percent female in:

- Family and consumer sciences/human sciences (74%),
- Public administration and services (70%),
- Area, ethnic, cultural and gender studies (68%) and
- Health professions and related clinical sciences (66%).

The fields with a low percent female that year among full-time doctoral enrolments were:

- Computer and information sciences and support services (23%),
- Engineering (24%), and
- Mathematics and statistics (28%).

1.13 Full-time enrolments by International student status

International students make up an increasing number of full-time graduate enrolments in Canada; 24% of full-time Master's enrolments and 30% of full-time doctoral enrolments, as of 2013. These percentages are up from 16% of full-time Master's and 27% of full-time doctoral enrolments in 1992. See Table 1.14,

Figure 1.13 and Figure 1.14.

For full-time Master's enrolments much of that increase has been in the most recent five years for which we have data: 2009 to 2013. In 2009 only 16% of full-time Master's enrolments were international students. There were 13,689 full-time enrolments in Master's programs by international students in 2009; that number had increased to 21,612 by 2013, an increase of 7,923. During that same five year time frame, full-time Master's enrolments by Canadian citizens and permanent residents went from 63,795 to 68,121, an increase of 4,326.

Table 1.14 and Figure 1.14 document that there is a similar increase among full-time doctoral enrolments by international students. The "boxed" area for the years 2009-2013 in Figure 1.14 shows that enrolments by international students rose during this five year period, while those by Canadian citizens and permanent residents tapered off.

Table 1.14 gives the details of this pattern. In 2009 there were 10,101 full-time doctoral enrolments by international students. This had increased to 14,820 (an increase of 4,719). During the same time period, full-time doctoral enrolments by Canadian citizens and permanent residents went from 33,057 to 33,906, an increase of only 849.

Overall, there was a slight decrease in the number of full-time international enrolments in the early 1990s (in the years 1992 to 1995

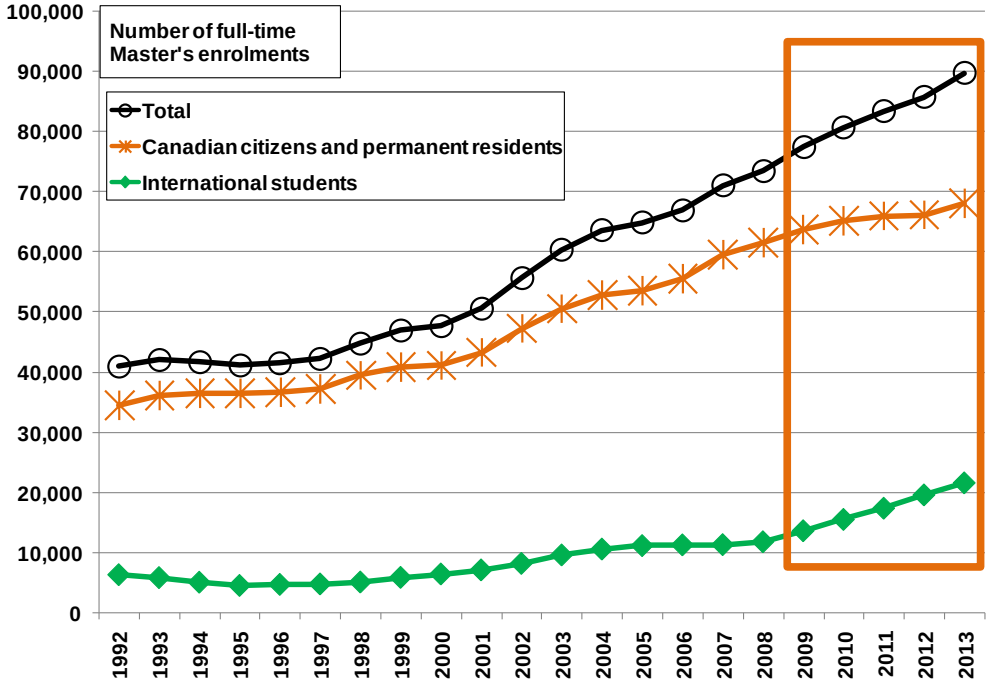
for Master's, from 1993 to 1999 for doctoral enrolments). This was a time period when full-time graduate enrolments by Canadian citizens and permanent residents were increasing. Since 2007, full-time graduate enrolments by international students have been increasing, while those of Canadian citizens and permanent residents have leveled off. Hence we see an increase in recent years in the the *percentage* of full-time enrolments which are international.

Table 1.14 – Full-time Master's and doctoral enrolments, number and percent international students, 1992-2013

Year	Total full-time Master's enrolments	Canadian citizens & permanent residents	International students	% International	Total full-time doctoral enrolments	Canadian citizens & permanent residents	International students	% International
1992	40,989	34,575	6,414	15.6	20,910	15,171	5,739	27.4
1993	42,156	36,222	5,934	14.1	22,122	15,978	6,144	27.8
1994	41,700	36,531	5,169	12.4	22,665	16,851	5,814	25.7
1995	41,223	36,588	4,635	11.2	22,764	17,499	5,265	23.1
1996	41,583	36,777	4,806	11.6	22,758	17,772	4,986	21.9
1997	42,189	37,308	4,881	11.6	22,722	18,165	4,557	20.1
1998	44,796	39,597	5,199	11.6	23,724	19,161	4,563	19.2
1999	46,935	40,965	5,970	12.7	23,676	19,332	4,344	18.3
2000	47,760	41,229	6,531	13.7	23,727	19,311	4,416	18.6
2001	50,574	43,368	7,206	14.2	24,621	19,905	4,716	19.2
2002	55,638	47,355	8,283	14.9	26,595	21,126	5,469	20.6
2003	60,297	50,616	9,681	16.1	29,874	23,193	6,681	22.4
2004	63,591	52,938	10,653	16.8	32,511	25,179	7,332	22.6
2005	64,875	53,646	11,229	17.3	34,455	26,730	7,725	22.4
2006	66,966	55,617	11,349	16.9	36,723	29,010	7,713	21.0
2007	71,034	59,646	11,388	16.0	38,601	30,546	8,055	20.9
2008	73,494	61,629	11,865	16.1	40,260	31,620	8,640	21.5
2009	77,484	63,795	13,689	17.7	43,158	33,057	10,101	23.4
2010	80,715	65,151	15,564	19.3	45,102	33,933	11,169	24.8
2011	83,409	65,994	17,415	20.9	46,782	34,134	12,648	27.0
2012	85,809	66,189	19,620	22.9	48,006	34,242	13,764	28.7
2013	89,733	68,121	21,612	24.1	48,726	33,906	14,820	30.4

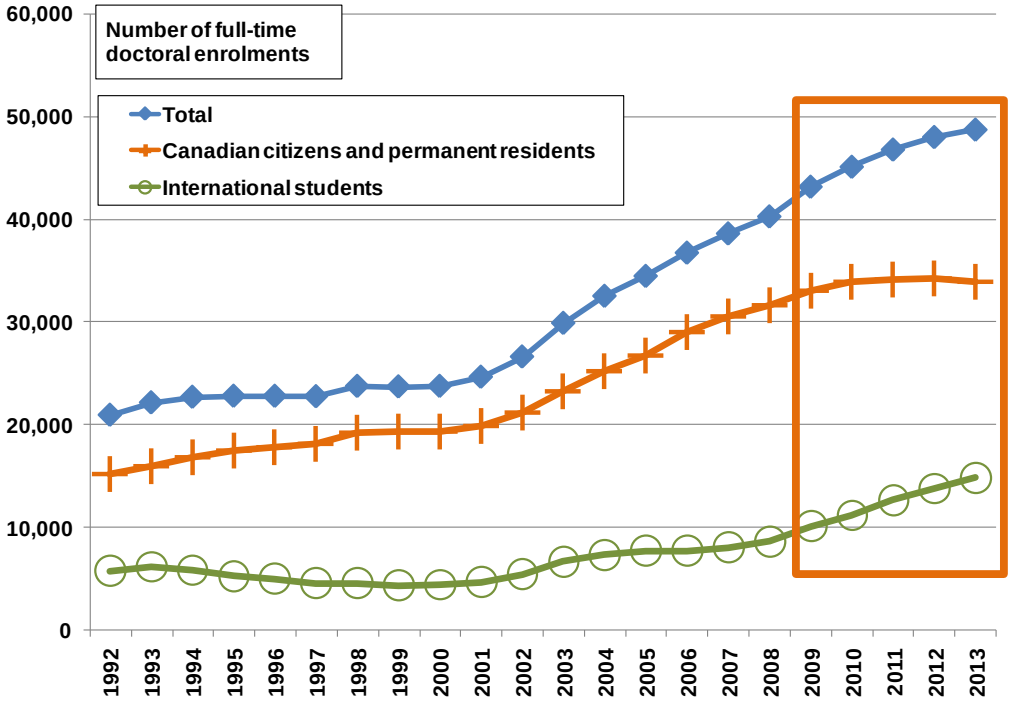
Source: Statistics Canada

Figure 1.13 – Full-time Master's enrolments by international student status, 1992-2013



Source: Statistics Canada.

Figure 1.14 – Full-time doctoral enrolments by international student status, 1992-2013



Source: Statistics Canada.

1.14 Full-time enrolments by International student status and Gender

We have seen, above, that the percentage of full-time graduate enrolments in Canada has been increasing. In Table 1.15 we see repeated the overall percentage female for 1993, 2003 and 2013. By 2003, females already made up 51% of all full-time Master's enrolments. However, the percentage of females among international enrolments is lower. In 1993, 37% of international Master's enrolments were female. This percentage increased only to 43% in 2003, and was essentially the same in 2013.

The increasing inclusion of international students has not, then, increased the percentage of females enrolled full-time in Master's programs in Canada. Indeed the percentage of females among these full-time Master's enrolments has been 52% to 54% among all enrolments since 2004. During that time period international enrolments were consistently 41%-43% female.

Table 1.15 – Full-time Master's and doctoral enrolments by international student status and gender, 1993, 2003, 2013

Year	1993			2003			2013		
Master's	Total enrolments	International enrolments	Percentage international	Total enrolments	International enrolments	Percentage international	Total enrolments	International enrolments	Percentage international
Male	22,356	3,765	16.8	29,514	5,565	18.9	40,890	12,477	30.5
Female	19,803	2,166	10.9	30,777	4,113	13.4	48,825	9,129	18.7
% female	47.0	36.5		51.0	42.5		54.4	42.3	
Doctoral	Total enrolments	International enrolments	Percentage international	Total enrolments	International enrolments	Percentage international	Total enrolments	International enrolments	Percentage international
Male	14,037	4,698	33.5	16,272	4,335	26.6	25,434	9,132	35.9
Female	8,082	1,446	17.9	13,602	2,346	17.2	23,286	5,685	24.4
% female	36.5	23.5		45.5	35.1		47.8	38.4	

Source: Statistics Canada

A similar pattern is seen among full-time doctoral enrolments, where females continue to be a minority. The percentage of females among all full-time doctoral enrolments increased from 37% in 1993 to 46% in 2003, and 47% in 2013. The comparable percentages for international enrolments were: 24% in 1993, 35% in 2003 and 38% in 2013, an increase, but still well below the levels for Canadian citizens and permanent residents. And this pattern has not changed much since the early 2000s.

1.15 Full-time enrolments by International student status and Province

Given the different patterns of increase in full-time graduate enrolments by province which we saw, above, it is interesting to see if the provinces differ in their propensity to attract international enrolments.

As of 2013, (see the right hand column of Table 1.16) the three provinces with the highest percentage of full-time international enrolments at the Master's level were: Newfoundland and Labrador (40%), New Brunswick (39%) and Saskatchewan (36%).

Interestingly, the provinces with the largest overall enrolments of international students (Ontario and Quebec at 7,611 and 5,652) were somewhat below the national average of 24% in terms of the *percentage* of their enrolments being by international students (Ontario 22% and Quebec 23%).

Table 1.16 – Full-time Master's enrolments by number and percent of international enrolments by province, 1993, 2003, 2013

Year	1993			2003			2013		
Province	Total enrolments	International enrolments	Percentage international	Total enrolments	International enrolments	Percentage international	Total enrolments	International enrolments	Percentage international
Total Canada	42,156	5,934	14.1	60,297	9,681	16.1	89,733	21,612	24.1
Newfoundland and Labrador	516	129	25.0	861	174	20.2	1,422	561	39.5
Prince Edward Island	21	6	28.6	33	9	27.3	246	15	6.1
Nova Scotia	1,659	276	16.6	2,310	480	20.8	2,901	867	29.9
New Brunswick	795	174	21.9	1,014	204	20.1	942	369	39.2
Quebec	12,855	1,791	13.9	19,338	3,078	15.9	24,399	5,652	23.2
Ontario	14,622	1,674	11.4	21,141	2,997	14.2	35,229	7,611	21.6
Manitoba	1,506	240	15.9	1,506	279	18.5	2,262	558	24.7
Saskatchewan	1,131	270	23.9	1,539	432	28.1	2,538	924	36.4
Alberta	3,126	459	14.7	4,695	750	16.0	8,478	1,953	23.0
British Columbia	5,922	915	15.5	7,857	1,281	16.3	11,313	3,105	27.4

Source: Statistics Canada

In Table 1.17 we see a similar pattern among full-time doctoral enrolments, although the smaller numbers overall make percentages more volatile. For full-time doctoral enrolments, the provinces with the highest percentage of international enrolments in 2013 were: Newfoundland and Labrador (48%), Saskatchewan (48%) and Alberta (42%). Ontario stands out as having the lowest percentage of full-time international doctoral enrolments in 2013 (23%), despite having some of the largest numbers of these enrolments. This compares to the Canadian average of 30%.

Table 1.17 – Full-time doctoral enrolments by number and percent of international enrolments by province, 1993, 2003, 2013

Year	1993			2003			2013		
Province	Total enrolments	International enrolments	Percentage international	Total enrolments	International enrolments	Percentage international	Total enrolments	International enrolments	Percentage international
TOTAL, all fields, Canada	22,122	6,144	27.8	29,874	6,681	22.4	48,726	14,820	30.4
Newfoundland and Labrador	165	81	49.1	279	99	35.5	585	279	47.7
Prince Edward Island	0	0	0.0	15	6	40.0	60	24	40.0
Nova Scotia	423	144	34.0	519	129	24.9	726	195	26.9
New Brunswick	240	108	45.0	291	72	24.7	438	162	37.0
Quebec	5,940	1,707	28.7	9,648	1,995	20.7	15,033	4,665	31.0
Ontario	9,102	2,094	23.0	11,592	2,367	20.4	19,062	4,332	22.7
Manitoba	624	213	34.1	558	129	23.1	996	375	37.7
Saskatchewan	444	207	46.6	588	213	36.2	1,164	555	47.7
Alberta	2,037	630	30.9	2,898	810	28.0	4,827	2,040	42.3
British Columbia	3,147	960	30.5	3,489	855	24.5	5,832	2,196	37.7

Source: Statistics Canada

1.16 Full-time enrolments by International student status and Main Field of Study

Not surprisingly certain fields of study attract more international enrolments than others. Those with the highest percentage of international students among full-time Master's enrolments in 2013 (see Table 1.18) are:

- Architecture, Engineering and Related Technologies (47%),
- Mathematics, Computer and Information Sciences (46%), and
- Business, Management and Public Administration (28%).

Indeed Architecture, Engineering and Related Technologies and Mathematics, and Computer and Information Sciences have attracted more than the national average in full-time Master's international enrolments since 1992. Business, Management and Public Administration has done so since 1997. Health and Related Fields, Humanities; Education; and Visual and Performing Arts; and Communications Technologies have been below the national average since 1992. (Detailed data by year not shown.)

Those above and below the national average in terms of percentage of international enrolments are similar for full-time doctoral

enrolments as they were for Master's enrolments (see Table 1.19). Consistently higher than average in attracting international enrolments were:

- Architecture, Engineering and Related Technologies (50% in 2013) and
- Mathematics, Computer and Information Sciences (45% in 2013).

Also consistently high for international enrolments in doctoral programs (detailed data by year not shown) are enrolments in:

- Agriculture, Natural Resources and Conservation (46% in 2013).
- Consistently below average in international enrolments in full-time doctoral programs are:
- Visual and Performing Arts and Communications Technologies (22% in 2013),
- Humanities, Social and Behavioural Sciences, and Law (21% in 2013),
- Health and Related Fields (21% in 2013) and
- Education (14% in 2013).

Table 1.18 – Full-time Master's enrolments by number and percent of international enrolments by main field of study, 1993, 2003, 2013

Year	1993			2003			2013		
Main field of study	Total enrolments	International enrolments	Percent international	Total enrolments	International enrolments	Percent international	Total enrolments	International enrolments	Percent international
TOTAL, all fields, Canada	42,156	5,934	14.1	60,297	9,681	16.1	89,733	21,612	24.1
Agriculture, Natural Resources and Conservation	1,743	363	20.8	2,322	333	14.3	3,204	804	25.1
Architecture, Engineering and Related Technologies	6,339	1,389	21.9	9,957	2,187	22.0	14,535	6,825	47.0
Business, Management and Public Administration	7,281	669	9.2	11,733	2,118	18.1	17,613	4,857	27.6
Education	3,639	330	9.1	3,519	309	8.8	5,571	636	11.4
Health and Related Fields	3,285	342	10.4	5,301	465	8.8	12,801	933	7.3
Humanities	4,656	474	10.2	4,824	555	11.5	5,169	570	11.0
Mathematics, Computer and Information Sciences	2,337	555	23.7	4,347	972	22.4	5,211	2,403	46.1
Personal, Protective and Transportation Services	33	0	0.0	69	6	8.7	144	6	4.2
Physical and Life Sciences, and Technologies	4,857	840	17.3	7,608	1,131	14.9	9,051	1,857	20.5
Social and Behavioural Sciences, and Law	6,615	873	13.2	8,652	1,392	16.1	12,984	2,175	16.8
Visual and Performing Arts, and Communications Technologies	1,233	90	7.3	1,668	186	11.2	2,667	435	16.3
Other	135	6	4.4	294	24	8.2	783	111	14.2

Source: Statistics Canada

Table 1.19 - Full-time doctoral enrolments by number and percent of international enrolments by main field of study, 1993, 2003, 2013

Year	1993			2003			2013		
Main field of study	Total enrolments	International enrolments	Percent international	Total enrolments	International enrolments	Percent international	Total enrolments	International enrolments	Percent international
TOTAL	22,122	6,144	27.8	29,874	6,681	22.4	48,726	14,820	30.4
Agriculture, Natural Resources and Conservation	828	366	44.2	897	264	29.4	1,572	717	45.6
Architecture, Engineering and Related Technologies	3,525	1,641	46.6	4,545	1,611	35.4	9,039	4,479	49.6
Business, Management and Public Administration	606	150	24.8	1,230	315	25.6	1,824	477	26.2
Education	1,662	246	14.8	2,208	267	12.1	2,718	378	13.9
Health and Related Fields	1,203	279	23.2	1,950	294	15.1	3,840	792	20.6
Humanities	3,519	654	18.6	3,651	690	18.9	4,761	1,002	21.0
Mathematics, Computer and Information Sciences	1,182	495	41.9	1,791	636	35.5	2,796	1,254	44.8
Personal, Protective and Transportation Services	27	6	22.2	36	9	25.0	15	3	20.0
Physical and Life Sciences, and Technologies	5,205	1,455	28.0	6,879	1,455	21.2	10,200	3,543	34.7
Social and Behavioural Sciences, and Law	3,972	795	20.0	5,985	1,059	17.7	10,128	1,794	17.7
Visual and Performing Arts, and Communications Technologies	243	30	12.3	522	60	11.5	1,233	270	21.9
Other	156	24	15.4	171	18	22.4	600	111	18.5

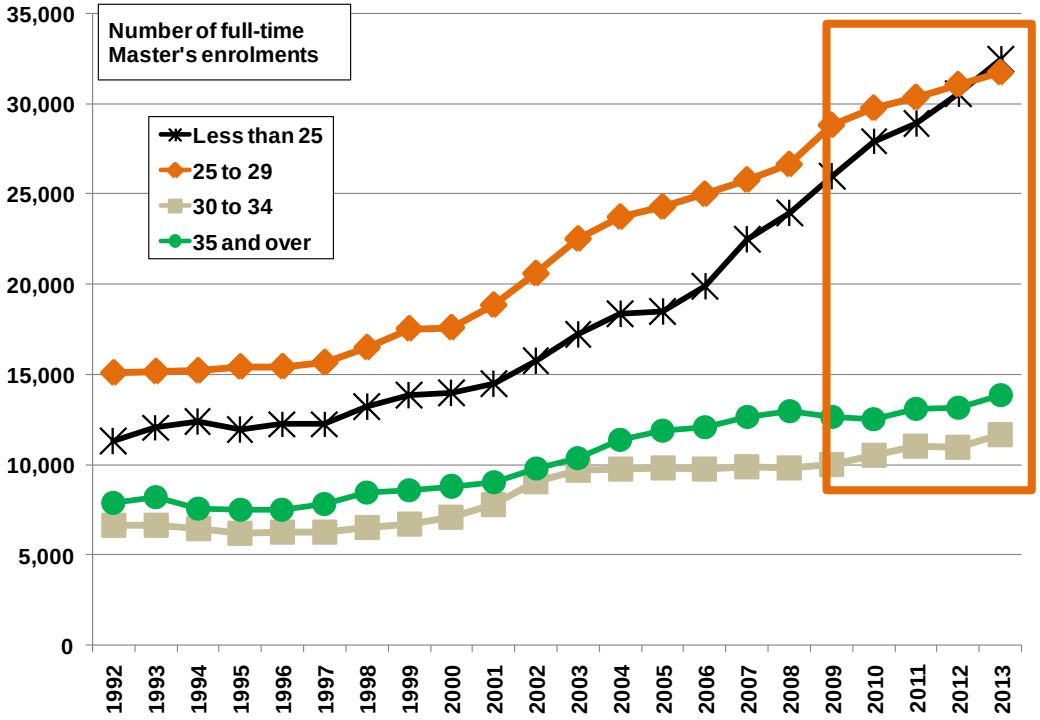
Source: Statistics Canada

1.17 Full-time enrolments by Age groups

Enrolment in graduate programs varies by age groups. Master's enrolments have more of those in younger age groups enrolled, while doctoral programs attract somewhat older students, by nature of the way graduate programs tend to be structured.

Figure 1.15 shows the age grouping for full-time Master's enrolments, over time. While the number of enrolments is increasing for all age groups, the increase has been most pronounced among the youngest group, those less than 25 years of age. The number from this age group has particularly increased in the five year period from 2009 to 2013, going from 25,992 to 32,466 enrolments. See Table 1.20.

Figure 1.15 – Full-time Master's enrolments by age groups, 1992-2013



Source: Statistics Canada.

Table 1.20 – Full-time Master's and doctoral enrolments by age groups, 1992-2013

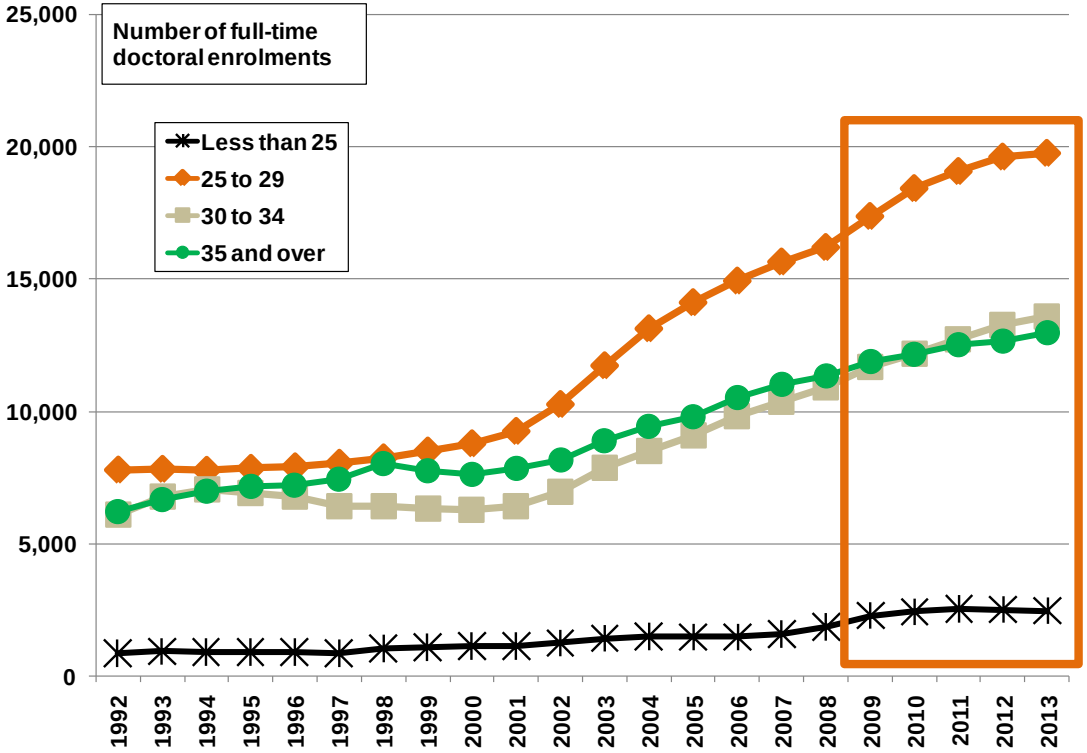
	Master's					Doctoral				
Year	Total number	Less than 25	25-29 years	30-34 years	35 years and over	Total number	Less than 25	25 to 29	30 to 34	35 and over
1992	40,989	11,310	15,099	6,645	7,878	20,910	837	7,764	6,096	6,201
1993	42,156	12,054	15,171	6,672	8,205	22,122	906	7,791	6,765	6,654
1994	41,700	12,393	15,216	6,450	7,581	22,665	888	7,755	7,047	6,966
1995	41,223	11,976	15,429	6,216	7,512	22,764	882	7,830	6,891	7,152
1996	41,583	12,243	15,444	6,282	7,515	22,758	882	7,887	6,795	7,191
1997	42,189	12,243	15,672	6,291	7,818	22,722	855	8,022	6,414	7,425
1998	44,796	13,203	16,503	6,552	8,460	23,724	1,029	8,226	6,420	8,034
1999	46,935	13,860	17,541	6,699	8,592	23,676	1,077	8,484	6,318	7,758
2000	47,760	13,983	17,604	7,092	8,811	23,727	1,110	8,757	6,255	7,587
2001	50,574	14,490	18,855	7,791	9,051	24,621	1,119	9,225	6,426	7,824
2002	55,638	15,762	20,601	9,048	9,816	26,595	1,239	10,242	6,954	8,133
2003	60,297	17,223	22,521	9,702	10,374	29,874	1,410	11,706	7,869	8,856
2004	63,591	18,384	23,730	9,756	11,379	32,511	1,473	13,104	8,493	9,414
2005	64,875	18,513	24,294	9,849	11,913	34,455	1,464	14,091	9,099	9,789
2006	66,966	19,872	24,990	9,783	12,051	36,723	1,467	14,907	9,834	10,500
2007	71,034	22,482	25,785	9,867	12,675	38,601	1,584	15,627	10,359	11,013
2008	73,494	23,943	26,643	9,810	12,987	40,260	1,845	16,176	10,914	11,310
2009	77,484	25,992	28,815	10,005	12,660	43,158	2,283	17,349	11,658	11,862
2010	80,715	27,909	29,763	10,506	12,513	45,102	2,424	18,402	12,162	12,114
2011	83,409	28,893	30,357	11,016	13,077	46,782	2,538	19,047	12,696	12,477
2012	85,809	30,573	31,065	10,986	13,179	48,006	2,514	19,593	13,278	12,621
2013	89,733	32,466	31,734	11,667	13,854	48,726	2,463	19,734	13,575	12,951

Source: Statistics Canada

Figure 1.16 gives the equivalent patterns for full-time doctoral enrolments from 1992 to 2013. As one would expect, the youngest age group has very low enrolments in full-time doctoral programs. It is the 25 to 29 year old group that is most numerous among these enrolments. This age group is also the one that has increased the most in recent years, although full-time doctoral enrolments in all age

groups tapered off from 2012 to 2013 (see Table 1.20 and Figure 1.16).

Figure 1.16 – Full-time doctoral enrolments by age groups, 1992-2013



Source: Statistics Canada.

1.18 Age projections and enrolments relative to population

There are a number of factors that will affect enrolment in graduate programs in the future. One factor is demographic: the size of the age group from which these students are drawn. This next section addresses this demographic issue by providing two types of data.

One is the projected trends into the future of the population of Canadian residents within the age groups of potential students.[1] The second presents the levels and trends over the years 1992-2013, in the share of the population of graduate students at the Canada level, within these age groups.

First to consider is which of the age groups under consideration is projected to increase, which stay the same and which decrease into the future, according to various projection scenarios.

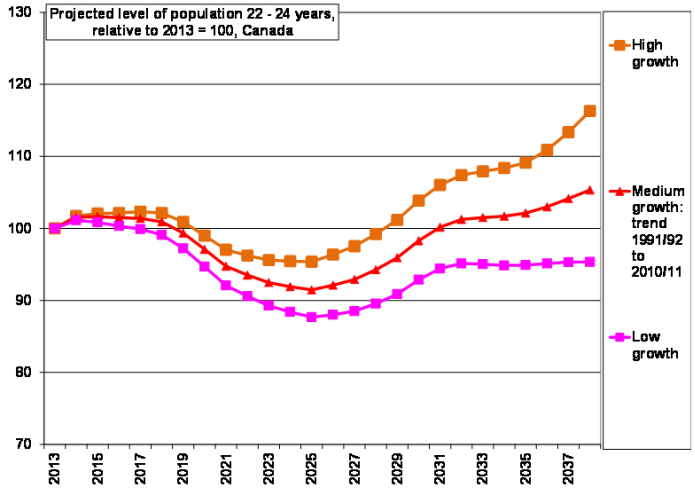
These projections are based on three different growth scenarios: low growth, medium growth and high growth. See http://www.statcan.gc.ca/pub/91-520-x/2014001/tbl/tbl1.1-eng.htm for details of assumptions and calculations.

Table 1.21 – Assumptions for growth projections, Canada

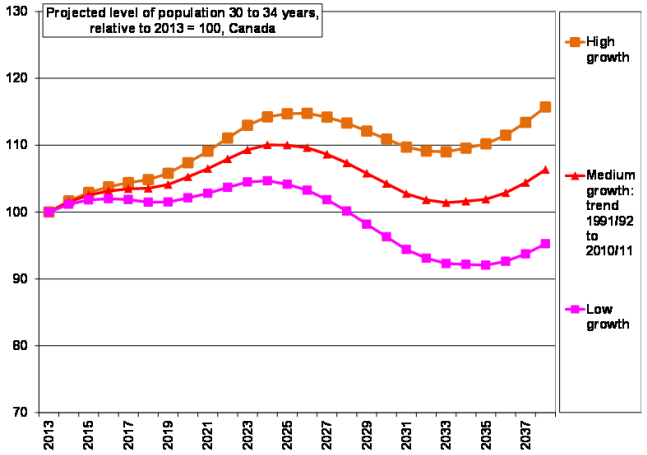
	Low growth	Medium growth	High growth
Fertility	1.53	1.67	1.88
Immigration/ per 1,000	5	7.5	9
Life expectancy at birth - male	86	87.6	89.9
Life expectancy at birth - female	87.3	89.2	91.9
Non-permanent residents	733,800	864,600	1,144,300
Emigration/per 1,000	1.9	2.2	2.5

[1] These projections can be found at: http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=0520005&paSer=&pattern=&stByVal=1&p1=1&p2=-1&tabMode=dataTable&csid=, Statistics Canada, CANSIM table 052-0005.

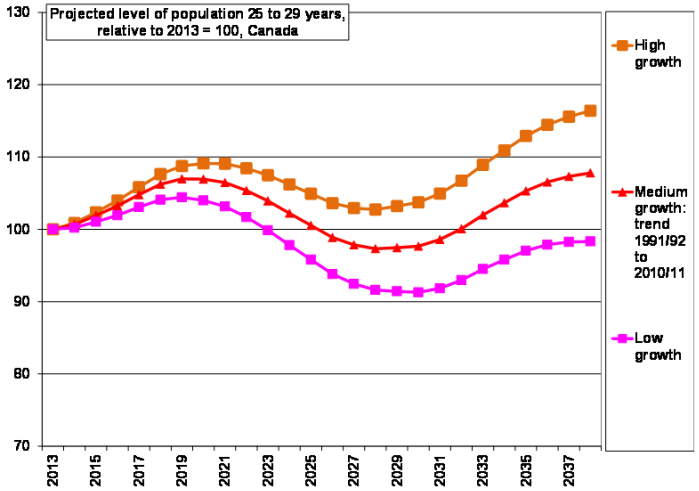
Figure 1.17 – Projection of level of population in specific age groups, Canada, 2013-2037



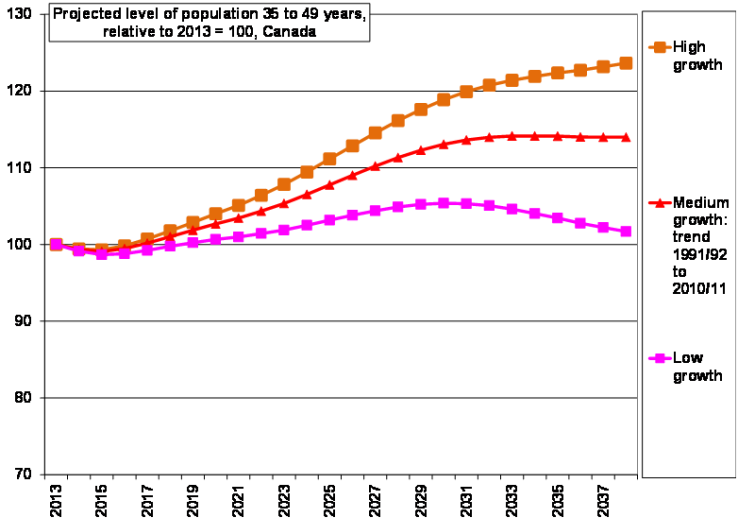
Source: Statistics Canada. Population Projections, CANSIM Table 052-0005.



Source: Statistics Canada. Population Projections, CANSIM Table 052-0005.



Source: Statistics Canada. Population Projections, CANSIM Table 052-0005.



Source: Statistics Canada. Population Projections, CANSIM Table 052-0005.

What these graphs show is the expected growth patterns of four age groups, in Canada, under the assumptions of low, medium or high growth.

Looking at the first chart, above, for 22-24 year olds, it is clear that the numbers in this group are expected to decline in the next few years. Whether this decline starts in 2016, 2018 or 2020 depends on the growth assumptions. The projections suggest that the number in this age group will not return to 2013 levels before 2028, even assuming high growth. This recovery is not expected to occur until 2030 if medium growth assumptions are correct. If low growth projections are more accurate, this age group will not rebound to more than 95% of 2012 levels in the foreseeable future.

For the group 25-29 years of age, there is a similar pattern, although there is a projection of growth in this age cohort for the next few years. Then there will be a decline starting in about 2020 and continuing to 2030, followed by an increase. However, only with low growth assumptions is there an expectation that this age group will have fewer numbers than was true in 2013.

The projections are more positive for the next oldest age group: 30-34 years of age. In Canada, this age group is expected to increase moderately until about 2026, and then decrease for about eight years. As was true for the 25-29 year old age group, the numbers of 30-34 year olds are expected to increase, except under low growth assumptions.

The oldest age being considered here (35-49 years of age) is projected to increase under all growth assumptions. Only under low growth assumptions is a down turn expected, and that not until about 2031. Even then, the projected numbers are higher than those evident in 2013.

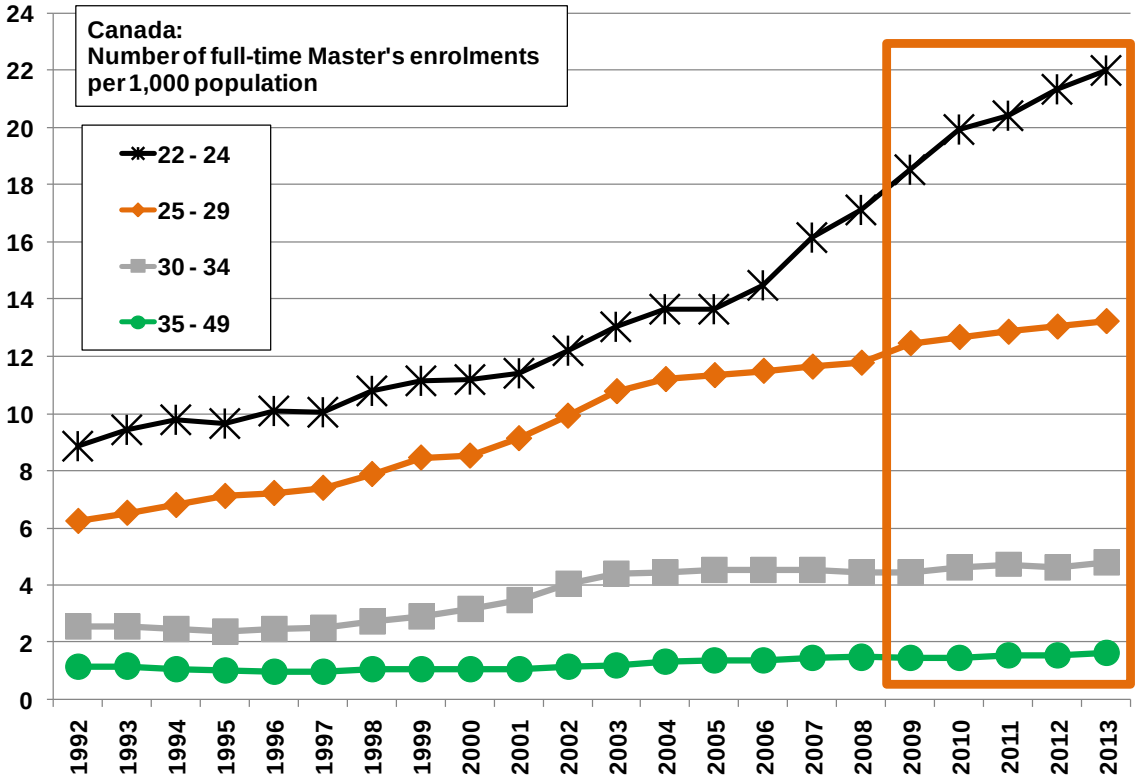
So, in the next ten years, the youngest age group is expected to hold its own or decline slightly, while the other age groups will increase. The youngest group (aged 22-24) will start to decline in about five years' time.

These demographic trends will undoubtedly have repercussions for potential recruits to undergraduate programs. But, what implications might these projected demographic trends have on expected enrolments in graduate programs? In order to answer this question, one needs to consider the share of the population subgroups that tend to enroll as graduate students.. Master's level programs are likely to be more directed affected than doctoral ones, since many if not most doctoral programs require a Master's level degree (or equivalent) for entry.

The next step is to consider how the enrolment patterns in graduate programs are distributed by age if we consider the actual age group distribution from 1992 to 2013. The figures below give the relevant information for Canada as a whole.[2]

[2] Comparable analyses for each province are available from the author, on request. See the 41st Statistical Report for this detail from 1992 to 2012. The author would like to express her appreciation to Ray D. Bollman for his assistance with these calculations.

Figure 1.18 Full-time Master's enrolments relative to population

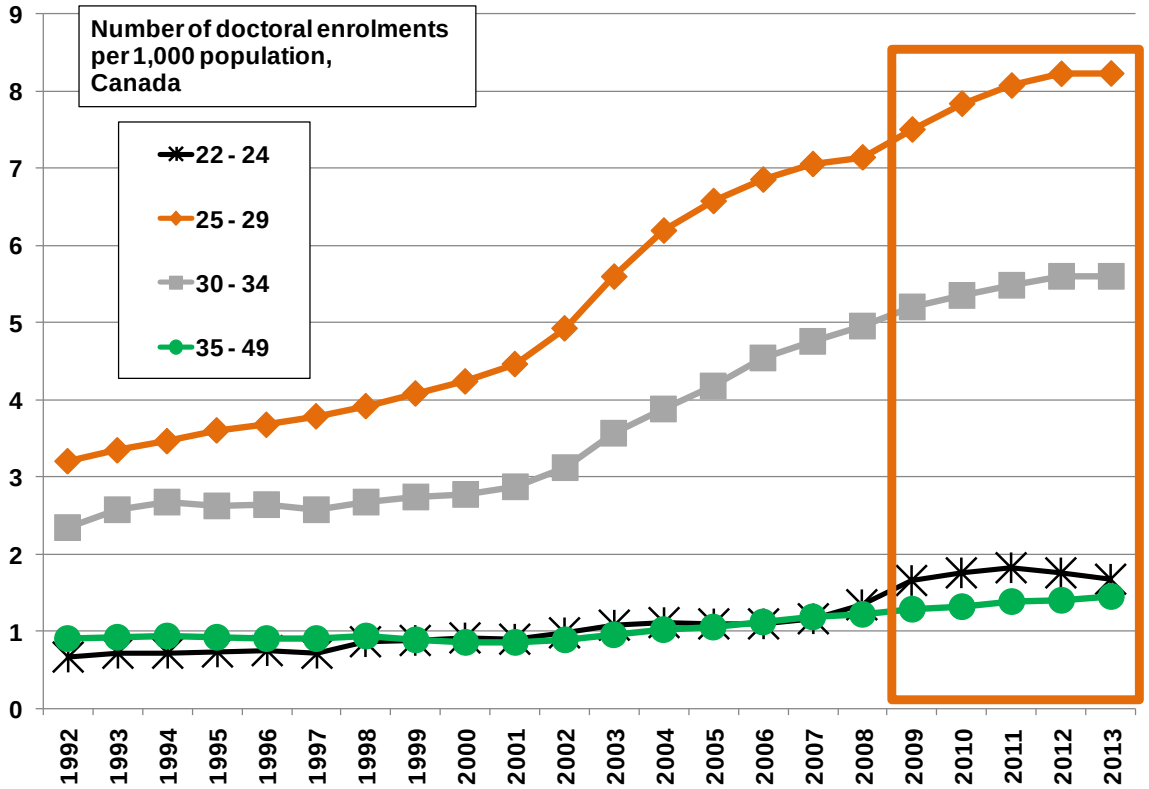


Source: Statistics Canada.

We saw in Figure 1.15 that the largest age group among full-time Master's enrolments was the 25 to 29 year old age group. Here we see that the age group with largest share of enrolments relative to the population is the younger age group: those less than 25.

Below we see the equivalent chart for full-time doctoral enrolments per 100,000 in the Canadian population. Here the interesting contrast with the pattern in Figure 1.16 is the high proportion of those in the oldest age group among full-time doctoral enrolments.

Figure 1.19 - Full-time doctoral enrolments relative to population



Source: Statistics Canada.

1.19 Full-time enrolments by Age and Gender

We saw, in Table 1.4, that the percent female among full-time Master's enrolments was 50% as of 1997, and more than 50% from 1998 to 2013. Table 1.22 documents that the concentration of females in full-time Master's enrolments tends to be in the younger and

older age groups. Those less than twenty-five years of age enrolled full-time in Master's programs are 50% or more female from 1993 to 2013. The same transition (to more than half of enrolments being female) happens in 1998 for those aged 25 to 29 years, and in 2011 for those aged 30-34 years. Finally, more than fifty percent enrolments in fulltime Master's programs who are thirty-five years of age and older have been female, in all years from 1992 to 2013.

Table 1.22 – Full-time Master's and doctoral enrolments, percent female by age groups, 1992-2013

Percent female	Master's				Doctoral			
Year	Less than 25 years	25-29 years	30-34 years	35 years and over	Less than 25 years	25-29 years	30-34 years	35 years and over
1992	47.7	42.7	42.0	54.2	37.1	33.0	30.0	42.1
1993	49.5	44.0	42.3	52.7	42.4	35.2	31.1	42.9
1994	50.8	44.5	43.4	54.3	46.3	37.3	31.6	44.5
1995	51.5	46.3	44.9	55.2	46.3	39.2	32.8	44.7
1996	52.6	47.2	44.2	54.7	47.1	40.5	34.7	45.0
1997	54.4	48.4	46.0	53.9	44.2	43.3	36.0	46.8
1998	54.6	49.8	45.5	53.4	49.9	43.6	39.3	47.9
1999	55.7	50.3	45.9	52.6	49.7	44.3	39.7	47.9
2000	56.1	51.3	44.5	51.3	51.8	45.0	40.9	48.7
2001	56.6	51.2	44.8	51.0	54.0	45.6	41.5	48.8
2002	56.6	51.0	44.2	50.8	53.9	46.3	41.5	47.2
2003	56.5	50.6	44.2	50.5	51.4	46.1	41.5	47.4
2004	57.0	51.6	45.9	49.5	51.6	46.0	41.8	47.4
2005	57.0	53.1	46.3	49.4	55.4	45.5	42.1	47.5
2006	57.7	52.8	47.7	50.6	53.3	46.0	43.0	47.9
2007	58.6	53.6	48.8	51.1	53.2	45.7	43.0	48.7
2008	59.5	53.9	49.3	50.8	54.5	46.5	43.6	48.9
2009	57.5	53.1	49.7	51.0	53.3	46.1	44.2	48.6
2010	56.8	52.6	49.4	51.5	50.3	46.7	44.5	49.2
2011	57.0	52.8	50.8	52.6	50.5	46.8	45.0	49.9
2012	57.2	52.9	52.5	53.0	50.4	46.5	45.1	49.9
2013	56.9	52.9	51.6	54.5	51.3	47.0	46.0	50.3

Source: Statistics Canada

The picture is different for doctoral enrollments. In no year from 1992 to 2013 do the two middle age groups (25-29 and 30-34 years of age) show 50% or more of full-time doctoral enrolments being female. The oldest age group shows 50% female among these

enrolments, basically since 2011. In contrast 50% or more of the youngest age group (less than 25 years of age), which also make up the smallest component of doctoral enrolments, were female in every year from 1998 to 2013.

1.20 Full-time enrolments by Age and International student status

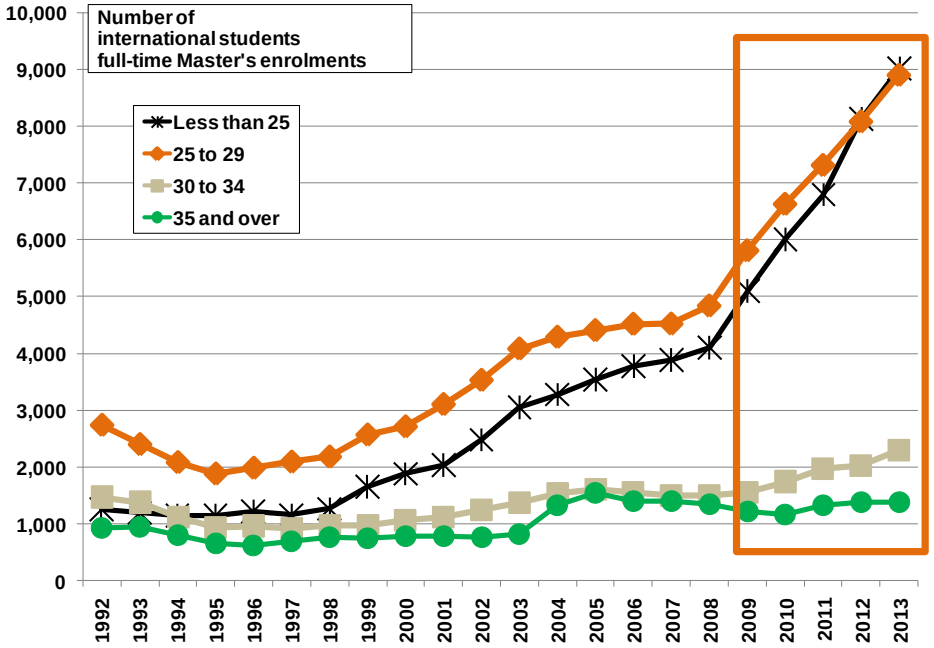
We have seen, above (see Table 1.14), the number and percentage of international students among full-time Master's enrolments has been increasing, especially in recent years. Table 1.23 and Figure 1.20 show that this increase is concentrated in the younger two age groups: those under 25, and those 25-29 years of age.

Table 1.23 - Full-time international Master's and doctoral enrolments, number by age groups, 1992-2013

	Master's				Doctoral			
Year	Less than 25 years	25 to 29 years	30 to 34 years	35 years and over	Less than 25 years	25 to 29 years	30 to 34 years	35 years and over
1992	1,257	2,742	1,479	927	213	2,046	1,983	1,491
1993	1,194	2,403	1,389	936	192	2,061	2,262	1,629
1994	1,146	2,085	1,134	795	180	1,827	2,172	1,641
1995	1,143	1,884	942	651	165	1,629	1,914	1,557
1996	1,215	1,986	975	615	162	1,599	1,719	1,506
1997	1,158	2,094	930	684	189	1,500	1,524	1,341
1998	1,266	2,184	978	765	213	1,623	1,419	1,299
1999	1,650	2,571	978	747	207	1,647	1,287	1,188
2000	1,884	2,715	1,080	774	237	1,713	1,278	1,179
2001	2,037	3,108	1,122	780	282	1,857	1,374	1,194
2002	2,481	3,534	1,248	768	309	2,307	1,554	1,296
2003	3,048	4,086	1,386	816	390	3,024	1,857	1,398
2004	3,276	4,293	1,542	1,332	402	3,495	1,983	1,440
2005	3,546	4,410	1,614	1,542	435	3,717	2,142	1,425
2006	3,774	4,521	1,557	1,404	417	3,717	2,157	1,404
2007	3,888	4,524	1,506	1,389	474	3,996	2,142	1,434
2008	4,107	4,842	1,503	1,350	477	4,323	2,337	1,482
2009	5,109	5,814	1,554	1,209	630	5,217	2,637	1,617
2010	6,012	6,633	1,749	1,167	750	5,871	2,841	1,701
2011	6,792	7,311	1,977	1,320	810	6,600	3,402	1,833
2012	8,127	8,073	2,031	1,371	846	7,056	3,885	1,974
2013	9,027	8,904	2,298	1,377	810	7,434	4,386	2,187

Source: Statistics Canada

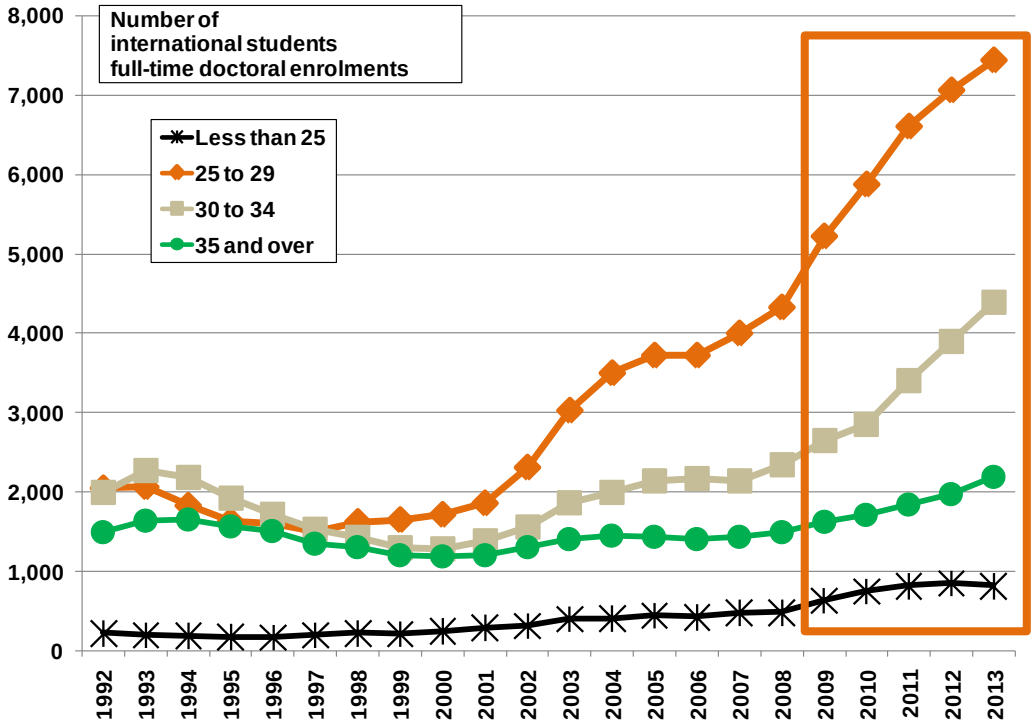
Figure 1.20– Full-time Master's enrolments, number of International enrolments, by age groups, 1992-2013



Source: Statistics Canada.

Figure 1.21 provides the equivalent information for full-time doctoral enrolments. Note the increase, particularly in recent years, from 2009 to 2013, in the number of international enrolments in the two middle age groups (two of the most populous age groups for doctoral enrolments).

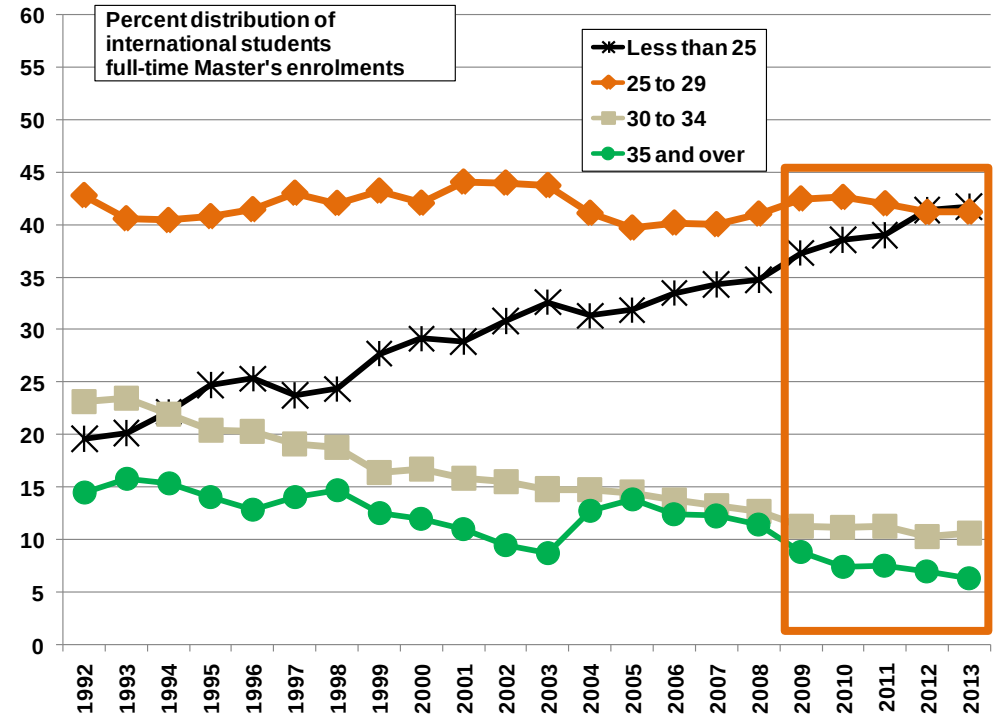
Figure 1.21 - Full-time doctoral enrolments, number of International enrolments, by age groups, 1992-2013



Source: Statistics Canada.

Figure 1.22 and Figure 1.23 present the same kind of information, in a slightly different format. They show the percentage distribution of international students, by age groups, in full-time Master's and doctoral enrolments. (So, the percentages in any one year would always add to 100%.)

Figure 1.22 - Full-time Master's enrolments, percentage distribution of international enrolments across age groups, 1992-2013

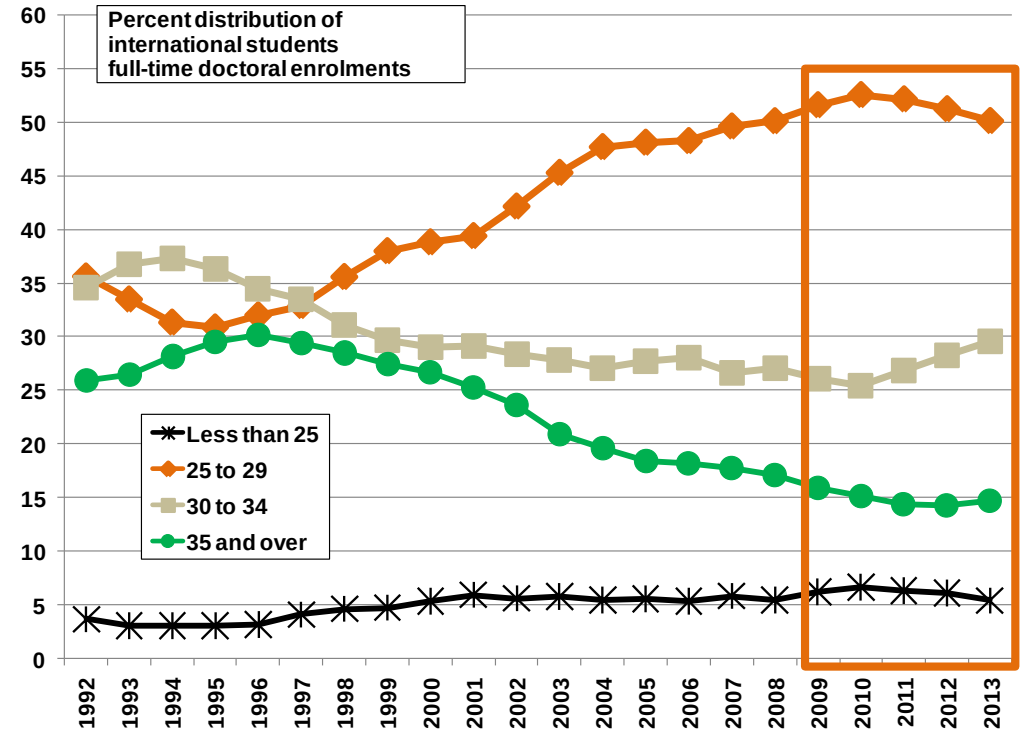


Source: Statistics Canada.

Here we see the way the percentage distribution of the four age groups has shifted over time. For full-time Master's enrolments, the largest age group, those 25 to 29 years of age, have consistently made up between 40% and 45% of the international enrolments. This percentage decreased slightly from 2009 to 2013, but is still above 40%.

Since 1992, and continuing in the most recent period (2009 to 2013), those in the under-25 year age group have increased their percentage among full-time Master's enrolments by international students. Over time there has been a decrease in the percentage of international enrolments among full-time Master's enrolments, in the age groups 30 to 35 years of age, and 35 years of age and over.

Figure 1.23 - Full-time doctoral enrolments, percentage distribution of international enrolments across age groups, 1992-2013



Source: Statistics Canada.

The age pattern among full-time doctoral enrolments by international students is somewhat different. The youngest group (those aged less than 25 years of age) has changed little from 1992 to 2013. However, the next oldest age group, those aged 25 to 29 years, has increased their share of full-time international doctoral enrolments, since 1995. The percentage in the age group 35 and over has corresponding decreased during that same time period.

In recent years, from 2009 to 2013, there has been a slight increase among these full-time international doctoral enrolments in the percentage from the 30 to 34 year old age group, and a slight corresponding decline in those who are 25 to 29 years old.

1.21 World region of full-time International student enrolments

International enrolments are an important part of full-time graduate enrolments at Canadian universities, as we have seen above. Table 1.24 and Table 1.25 show the world region from which these international enrolments are drawn, over the years 1992 to 2013.

Table 1.24 – Full-time Master's enrolments, world region of international enrolments, percent distribution, 1992-2013

Year	United States	Central America	Caribbean and Bermuda	South America	Europe	Western Europe	Eastern Europe	Northern Europe	.United Kingdom	Southern Europe	Africa	Asia	West Central Asia & Middle East	Eastern Asia	Southeast Asia	Southern Asia	Oceania
1992	7.2	1.0	2.5	3.6	16.4	7.4	2.2	4.5	2.2	2.2	20.9	45.9	5.7	25.7	6.9	7.6	1.1
1993	7.8	1.1	2.5	3.6	17.6	8.3	2.7	4.2	2.1	2.3	19.9	45.2	5.5	24.7	7.1	7.9	1.2
1994	9.7	1.5	2.0	3.2	19.0	10.0	2.1	4.7	2.1	2.1	18.5	43.0	5.0	23.6	6.1	8.3	1.5
1995	10.7	1.7	2.3	3.3	19.9	10.6	2.3	4.7	2.0	2.3	18.5	40.5	4.0	22.5	6.0	8.1	1.5
1996	11.3	2.2	2.7	3.7	21.7	11.4	3.8	4.9	2.1	1.6	18.1	37.8	2.6	22.1	5.6	7.5	1.2
1997	10.2	2.8	2.5	4.8	23.1	14.1	3.4	4.1	1.4	1.5	17.1	37.1	3.3	21.2	5.7	6.9	1.4
1998	9.5	2.9	2.5	4.2	23.0	14.4	3.3	3.2	1.1	2.1	17.1	36.8	3.2	21.6	5.0	6.9	1.2
1999	9.5	3.2	2.6	5.2	24.3	14.2	4.6	3.1	1.4	2.5	16.1	35.1	3.3	21.0	4.2	6.4	0.9
2000	8.2	3.5	2.3	4.3	23.5	14.0	4.0	2.9	1.4	2.5	16.4	35.2	4.1	20.4	4.1	6.6	1.0
2001	7.5	3.8	2.0	4.5	21.9	13.2	3.9	2.6	1.2	2.2	15.3	38.5	5.2	22.0	3.7	7.6	0.9
2002	8.3	3.9	2.6	3.7	20.0	12.1	3.7	2.3	1.1	1.8	13.5	43.2	6.5	23.8	3.1	9.9	0.8
2003	8.4	3.1	1.8	3.9	17.8	11.2	3.1	1.8	1.0	1.7	12.9	47.6	7.4	25.4	2.9	11.8	0.7
2004	8.6	2.5	1.4	3.8	16.3	10.6	2.5	1.9	1.1	1.3	9.6	54.7	9.6	30.2	2.9	12.0	0.5
2005	9.1	2.4	1.4	3.4	15.6	10.6	2.1	1.6	0.9	1.3	9.2	57.0	11.3	32.0	2.5	11.2	0.5
2006	9.5	2.4	1.2	3.3	15.1	10.4	1.7	1.8	1.0	1.2	9.4	56.4	10.9	31.8	2.4	11.3	0.6
2007	10.0	2.4	1.4	3.1	14.8	10.1	1.8	1.7	0.9	1.1	9.6	55.4	10.2	30.8	2.6	11.7	0.6
2008	9.4	2.3	1.5	3.2	14.2	9.9	1.6	1.6	0.9	1.0	10.5	54.4	10.8	29.5	2.2	11.9	0.5
2009	9.2	2.2	1.6	3.3	14.0	10.0	1.6	1.5	0.8	1.0	9.9	54.4	13.4	24.7	1.8	14.5	0.4
2010	8.8	2.0	1.2	3.4	13.4	9.7	1.5	1.2	0.8	1.0	9.4	59.0	15.7	23.8	2.0	17.6	0.4
2011	8.1	1.8	1.3	2.9	13.8	9.8	1.7	1.2	0.7	1.1	9.8	60.3	16.0	25.3	1.6	17.3	0.3
2012	7.2	1.6	1.2	2.6	13.0	9.5	1.3	1.2	0.7	1.0	10.0	63.0	13.8	29.2	1.5	18.6	0.3
2013	6.5	1.5	1.1	2.3	13.0	9.4	1.4	1.1	0.8	1.0	10.0	65.0	11.6	30.9	1.3	21.1	0.3

Source: Statistics Canada. Note: rows do not add to 100% because sub-regions are included.

Looking first at full-time Master's enrolments, as was reported in the 41st Statistical Report, there was a shift away from Europe to Asia. In 1999, 24% of the full-time Master's enrolments were from Europe; this declined to 13% in 2013. Note also the decline in the percentage of enrolments from Africa (from 21% in 1992 to 10% in 2013). International full-time Master's enrolments from Asia have

been high during all the years examined. This world region accounted for 46% of the full-time international Master's enrolments in 1992. This percentage decreased somewhat from 1995 to 2001, then increased again. The years 2009 to 2013 continued this increase so that, in 2013, 65% of all full-time international Master's enrolments in Canada were from Asia.

Table 1.25 – Full-time doctoral enrolments, world region of international enrolments, percent distribution, 1992-2013

Year	United States	Central America	Caribbean and Bermuda	South America	Europe	Western Europe	Eastern Europe	Northern Europe	.United Kingdom	Southern Europe	Africa	Asia	West Central Asia & Middle East	Eastern Asia	Southeast Asia	Southern Asia	Oceania
1992	9.6	1.7	0.8	4.4	14.1	5.7	2.0	4.1	2.2	2.2	21.8	44.8	8.7	22.0	4.5	9.6	2.2
1993	9.5	1.5	0.9	4.5	14.5	5.9	2.7	4.2	2.3	1.6	20.2	46.5	10.8	22.8	4.2	8.8	1.8
1994	10.5	1.5	0.8	4.9	15.7	6.7	3.1	4.4	2.2	1.7	19.1	44.9	12.8	19.7	4.4	7.9	1.9
1995	11.1	1.7	1.0	4.8	17.9	7.8	3.8	4.6	2.2	1.7	18.1	42.2	13.8	16.8	4.7	7.0	2.3
1996	12.0	1.9	1.1	5.2	19.7	9.0	4.1	4.6	2.0	1.9	16.3	40.7	12.9	17.7	4.0	6.1	2.4
1997	13.0	2.2	1.1	5.4	21.2	9.9	4.3	4.4	1.6	2.4	16.1	37.7	10.9	17.1	3.9	5.8	2.5
1998	12.2	2.8	1.1	5.8	23.5	12.3	4.9	3.8	1.5	2.6	16.0	35.4	9.1	17.4	4.0	4.9	2.1
1999	13.1	3.2	1.2	6.1	25.0	13.9	4.4	4.0	1.7	2.8	14.4	33.4	7.7	16.9	4.0	4.9	1.9
2000	12.0	3.6	1.4	5.9	25.6	13.8	5.2	4.1	1.8	2.5	15.1	33.2	7.3	16.8	3.9	5.1	1.6
2001	11.4	3.6	1.3	5.7	25.3	13.3	5.6	3.6	1.3	2.8	13.7	35.5	7.0	19.0	3.9	5.6	1.4
2002	10.1	3.8	0.8	5.3	24.4	12.8	5.3	3.5	1.5	2.8	12.6	39.1	9.0	20.0	3.7	6.4	1.1
2003	8.6	3.6	0.9	5.3	22.3	11.5	5.5	2.9	1.2	2.4	11.8	43.2	11.0	21.9	3.5	6.9	1.0
2004	9.0	3.4	0.8	5.0	21.8	11.9	4.9	2.6	1.3	2.4	11.0	44.9	12.5	21.6	3.4	7.3	0.9
2005	9.3	3.7	0.8	5.0	22.1	12.5	4.5	2.7	1.3	2.3	11.0	45.2	14.2	20.1	3.1	7.8	0.8
2006	10.3	3.9	0.8	4.9	21.9	13.1	4.0	2.5	1.3	2.3	11.5	44.1	14.4	18.9	3.2	7.5	0.9
2007	11.0	3.5	0.9	4.7	21.6	13.3	3.5	2.4	1.2	2.3	11.5	44.6	16.0	18.2	3.0	7.4	0.9
2008	10.7	3.3	0.8	4.6	20.2	12.8	3.0	2.2	1.3	2.2	11.0	44.9	18.6	16.5	2.6	7.3	0.8
2009	10.4	2.8	0.7	4.0	18.4	11.9	2.4	2.2	1.3	1.9	10.3	47.4	20.6	16.4	2.8	7.7	0.7
2010	10.4	2.7	0.8	4.1	18.3	12.0	2.3	2.1	1.3	1.9	9.9	50.3	22.0	17.3	2.7	8.3	0.6
2011	10.1	2.4	0.8	4.1	17.9	11.5	2.3	2.0	1.3	2.1	9.9	52.2	22.8	18.0	2.6	8.8	0.5
2012	9.8	2.2	0.7	4.4	18.3	11.6	2.4	1.9	1.2	2.4	10.4	52.7	22.9	18.9	2.4	8.5	0.5
2013	9.5	2.2	0.7	4.3	18.3	11.5	2.3	1.9	1.3	2.6	10.8	52.9	22.0	20.0	2.2	8.8	0.5

Source: Statistics Canada Note: rows do not add to 100% because sub-regions are included.

The world regions from which full-time doctoral enrolments are drawn show less dramatic shifts than is true for Master's level enrolments. The percentage from Europe varies between 14% and 26%, with the percentages being highest from 1999 to 2002. In the years 2009 to 2013, the percentage of full-time international doctoral enrolments from Europe is fairly constant at 18%.

From 1992 to 2013 there was the same decline in the percentage of full-time international doctoral enrolments from Africa that was evident for Master's enrolments in Table 1.24: from 22% to 11%. During the same time period, the percentage of full-time doctoral enrolments from Asia increased from 45% to 53%, much less of an increase than we saw with Master's level enrolments.

There was little shift in the world regions of full-time international doctoral enrolments during the five years, 2009 to 2013. Overall, about half of these enrolments come from Asia, just under 20% from Europe, 10% from Africa, and 10% from the United States.

1.22 Province of Permanent Residence for full-time enrollments of Canadian citizens and permanent residents

Finally, we look at the reported province of origin of those enrolled in full-time graduate programs, who are Canadian citizens and permanent residents. Table 1.26 provides some relevant information.

However, there are two important caveats to interpreting this table. One is the large number of "unknowns" for some provinces (especially Ontario, Quebec and Alberta). The other is that the meaning of the term "permanent residence" varies across the institutions which provide these data to Statistics Canada. For some it means the province in which you were raised (and likely where your parents still live). For others it is the province where you were living when you applied for admission to the graduate program, which could well be the province where you took your undergraduate degree or (for doctoral enrolments) your Master's degree. For still others the province listed could be the address you give where the university should contact you after graduation.

That said, Table 1.26 gives some limited indication of those provinces which draw heavily from their own residents for full-time graduate enrolments, and those which are more likely to attract enrolments from elsewhere.

What is noticeable in Table 1.26 is the high percentages for both Master's and doctoral enrolments from the "same province" in Ontario and Quebec, the provinces with the highest number of enrolments. Also notable are the *low* percentages of graduate enrolments from the "same province" in Alberta, Nova Scotia and Newfoundland and Labrador. This pattern could be seen as a reflecting an ability to attract out of province students.

Table 1.26 – Full-time Master's and doctoral enrolments, Canadian citizens and permanent residents by province of study, ranked by percent from the same province, 2013

Province of study, ranked by percentage from the same province, 2013	Total number of full-time enrolments, Canadian citizens and permanent residents	Number of full-time enrolments, Canadian citizens and permanent residents from same province	% full-time enrolments from same province, Canadian citizens and permanent residents	Number of Canadian citizens and permanent residents with "unknown" permanent residence
TOTAL Master's	68,121	52,581	77.2	1,935
Quebec	18,747	15,942	85.0	900
Ontario	27,621	22,083	80.0	444
Manitoba	1,707	1,332	78.0	51
New Brunswick	573	417	72.8	0
Prince Edward Island	231	168	72.7	0
British Columbia	8,211	5,910	72.0	45
Saskatchewan	1,611	1,146	71.1	21
Alberta	6,528	4,110	63.0	471
Newfoundland and Labrador	861	525	61.0	0
Nova Scotia	2,034	948	46.6	3
TOTAL Doctoral	33,906	23,814	70.2	2,703
Ontario	14,730	11,253	76.4	405
Quebec	10,365	7,335	70.8	1606
New Brunswick	276	195	70.7	0
Prince Edward Island	39	27	69.2	0
Manitoba	618	417	67.5	96
British Columbia	3,633	2,367	65.2	27
Saskatchewan	606	366	60.4	30
Newfoundland and Labrador	306	180	58.8	0
Nova Scotia	531	285	53.7	0
Alberta	2,787	1,389	49.8	636

Source: Statistics Canada

2 Degrees awarded

2.1 Portrait of graduate degrees awarded in Canada, 2013

The next part of this report examines graduate degrees awarded in Canada. For some tables, the time frame for which data are available is more limited, but in others the range of years from 1992 to 2013 is shown. First, an overall portrait of degrees awarded.

Table 2.1 – Profile of Master's and doctoral degrees awarded, Canada, 2013

Degrees awarded 2013		Master's	Percentage of total in 2013	Doctoral	Percentage of total in 2013
Total Degrees Awarded, Canada		46,698	100	7,059	100
Gender	Male	20,754	44.4	3,873	54.9
	Female	25,923	55.5	3,186	45.1
International enrolments		9,594	42.1	1,296	33.3
Province of study	Newfoundland and Labrador	750	1.6	63	0.9
	Prince Edward Island	93	1	12	0.2
	Nova Scotia	2,061	4.4	123	1.7
	New Brunswick	663	1.4	66	0.9
	Quebec	12,207	26.1	1,881	26.6
	Ontario	19,023	40.7	2,928	41.5
	Manitoba	825	1.8	117	1.7
	Saskatchewan	1,512	3.2	183	2.6
	Alberta	3,909	8.4	882	12.5
	British Columbia	5,649	12.1	804	11.4
Age groups	Less than 25 years of age	6,306	13.5	0	
	25-29 years	19,812	43.4	1,314	18.6
	30-34 years	8,352	17.9	3,054	43.3
	35 and over	12,201	26.1	2,688	38.0

Source: Statistics Canada

Overall, there were 46,698 Master's degrees and 7,059 doctoral degrees awarded in Canada in 2013. Fifty-six percent of the Master's degrees and 45% of the doctoral degrees were awarded to females in that year. International students received 42% of the Master's and 33% of the doctoral degrees.

As was true for enrolments, degrees awarded were concentrated in particular provinces, with Ontario and Quebec accounting for 41% and 26% of the Master's degrees, and 42% and 27% of the doctoral degrees, respectively.

Table 2.1 also shows the age distribution of recipients of graduate degrees in 2013. The 25-29 year olds accounted for the lion's share of Master's degrees granted (43%). For doctoral degrees, the largest percentage (also 43%) was from the 30-35 year old age group. Not surprisingly, there were no doctoral degrees awarded to those under 25 years of age.

The profile of graduate degrees is continued in Table 2.2 which lists these degrees by main field of study. Master's degrees were most likely to be awarded in certain fields:

- Business, Management and Public Administration (28%),
- Architecture, Engineering and Related Technologies (14%),
- Social and Behavioural Sciences and Law (13%) and
- Health and Related Fields (12%).

The profile of doctoral degrees awarded in 2013 was somewhat similar to that for Master's degress but there are some important differences. The most common doctoral degrees awarded in 2103 were in:

- Physical and Life Sciences and Technologies (25%);
- Architecture, Engineering and Related Technologies (20%).
- Social and Behavioural Sciences and Law (17%).

Table 2.2 – Profile of Master's and doctoral degrees awarded, Canada, 2013, continued – Main field of study

Degrees awarded 2013		Master's	Percent in 2013	Doctoral	Percent in 2013
Total Degrees Awarded, Canada		46,698	100	7,059	100
Main field of study	Education	4,929	10.6	375	5.3
	Visual & Performing Arts & Communications Tech.	1,098	2.4	141	2.0
	Humanities	2,088	4.5	567	8.0
	Social & Behavioural Sciences & Law	6,186	13.2	1,218	17.3
	Business, Management & Public Administration	12,942	27.7	234	3.3
	Physical & Life Sciences & Technologies	2,982	6.4	1,749	24.8
	Mathematics, Computer & Information Sciences	2,559	5.5	459	6.5
	Architecture, Engineering & Related Technologies	6,411	13.7	1,377	19.5
	Agriculture, Natural Resources & Conservation	1,338	2.9	246	3.5
	Health & Related Fields	5,742	12.3	609	8.6
	Personal, Protective & Transportation Services	102	0.2	3	0.0
	Other	324	0.7	78	1.1

Source: Statistics Canada

2.2 Master's and doctoral degrees awarded

Since the number of graduate enrolments have been increasing over time, it is not surprising that the number of degrees awarded has also increased over the years 1992 to 2013. This trend is shown in different ways in Table 2.3, Figure 2.1 and Figure 2.2.

There was a spike in the number of Master's degrees awarded in Canada in 2003. The number of Master's degrees awarded then stayed high and continued to increase, reaching a high of 46,698 degrees in 2013. This compares to 19,434 awarded in 1992. As we see in the bottom five rows of Table 2.3, there has been a 5% to 6% increase in Master's degrees awarded almost every year from 2009 to 2013.

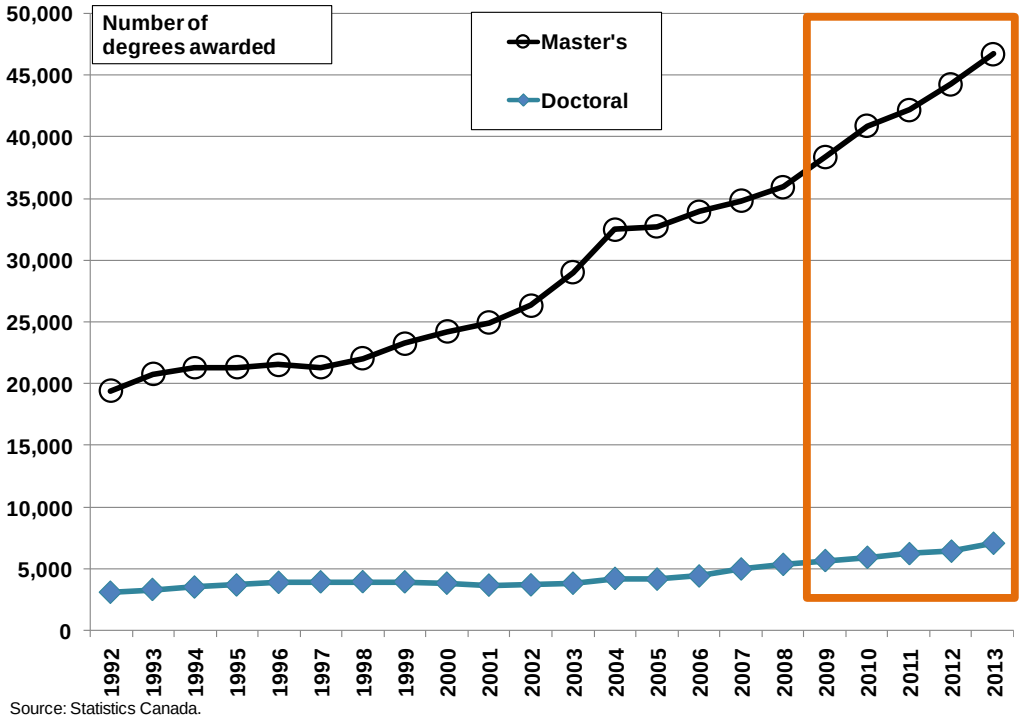
As one would expect, the numbers for doctoral degrees awarded are lower than for Master's. There were 3,135 doctoral degrees awarded in 1992, and 7,059 in 2013. There is less of a spike in the number of doctoral degrees awarded, although there was an increase of 13% from 2006 to 2007. From 1999 to 2001 there was a year to year decline in doctoral degrees awarded. Numbers of doctoral degrees have remained relatively high in recent years, increasing every year from 2009 to 2013; indeed increasing every year from 2006 to 2013.

Table 2.3 – Number of Master's and doctoral degrees awarded, Canada, change and percent change per year, 1992-2013

Year	Master's - Number	Annual change Master's - number	Annual change Master's - percent	Doctoral - Number	Annual change doctoral - number	Annual change doctoral - percent
1992	19,434			3,135		
1993	20,817	1,383	7.1	3,357	222	7.1
1994	21,291	474	2.3	3,552	195	5.8
1995	21,357	66	0.3	3,717	165	4.6
1996	21,558	201	0.9	3,927	210	5.6
1997	21,318	-240	-1.1	3,966	39	1.0
1998	22,026	708	3.3	3,978	12	0.3
1999	23,271	1,245	5.7	3,966	-12	-0.3
2000	24,228	957	4.1	3,861	-105	-2.6
2001	24,927	699	2.9	3,705	-156	-4.0
2002	26,343	1,416	5.7	3,723	18	0.5
2003	29,031	2,688	10.2	3,858	135	3.6
2004	32,511	3,480	12.0	4,245	387	10.0
2005	32,745	234	0.7	4,185	-60	-1.4
2006	33,948	1,203	3.7	4,437	252	6.0
2007	34,821	873	2.6	4,998	561	12.6
2008	35,961	1,140	3.3	5,367	369	7.4
2009	38,364	2,403	6.7	5,673	306	5.7
2010	40,872	2,508	6.5	5,934	261	4.6
2011	42,150	1,278	3.1	6,228	294	5.0
2012	44,154	2,004	4.8	6,393	165	2.6
2013	46,698	2,424	5.5	7,059	633	9.9

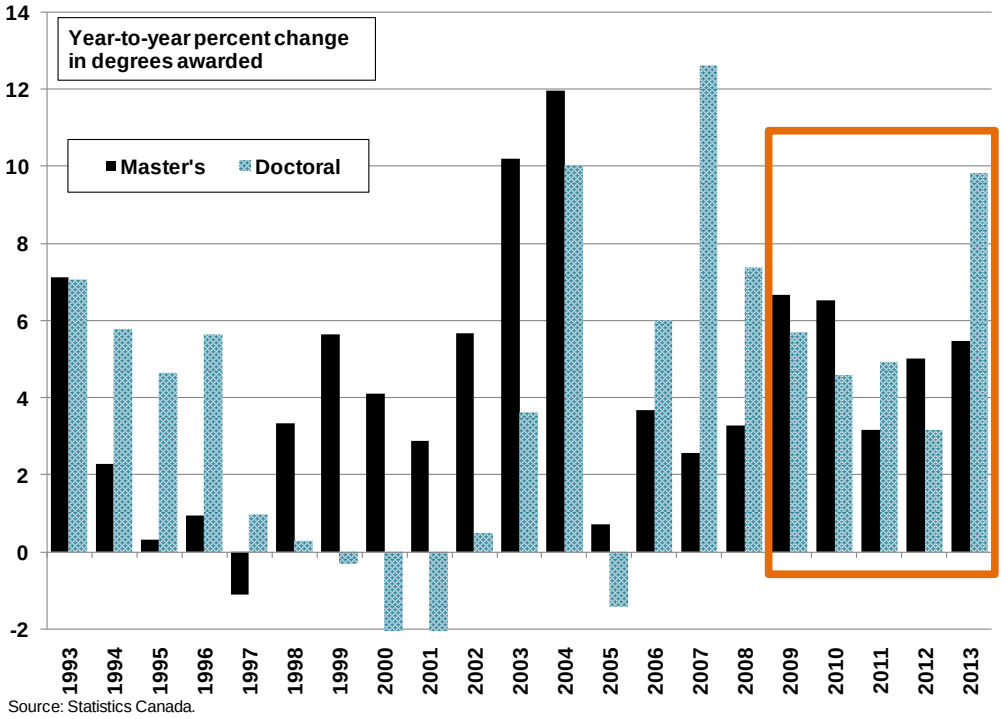
Source: Statistics Canada

Figure 2.1 – Master's and doctoral degrees awarded, Canada, 1992-2013



Source: Statistics Canada.

Figure 2.2 – Master's and doctoral degrees awarded, percent change by year, Canada, 1992-2013

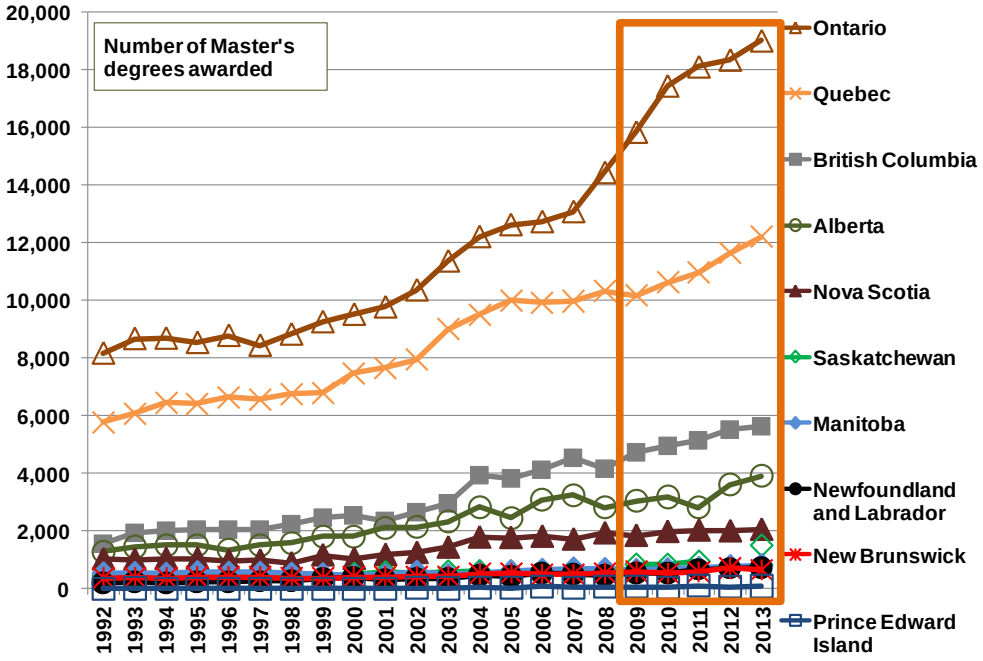


Source: Statistics Canada.

2.3 Graduate degrees awarded by Province

The distribution of degrees awarded by province mirrors the pattern of enrolments. Those provinces with the high numbers of Master's degrees awarded are Ontario and Quebec. These are also the two provinces with the steepest increases in recent years. See Figure 2.3.

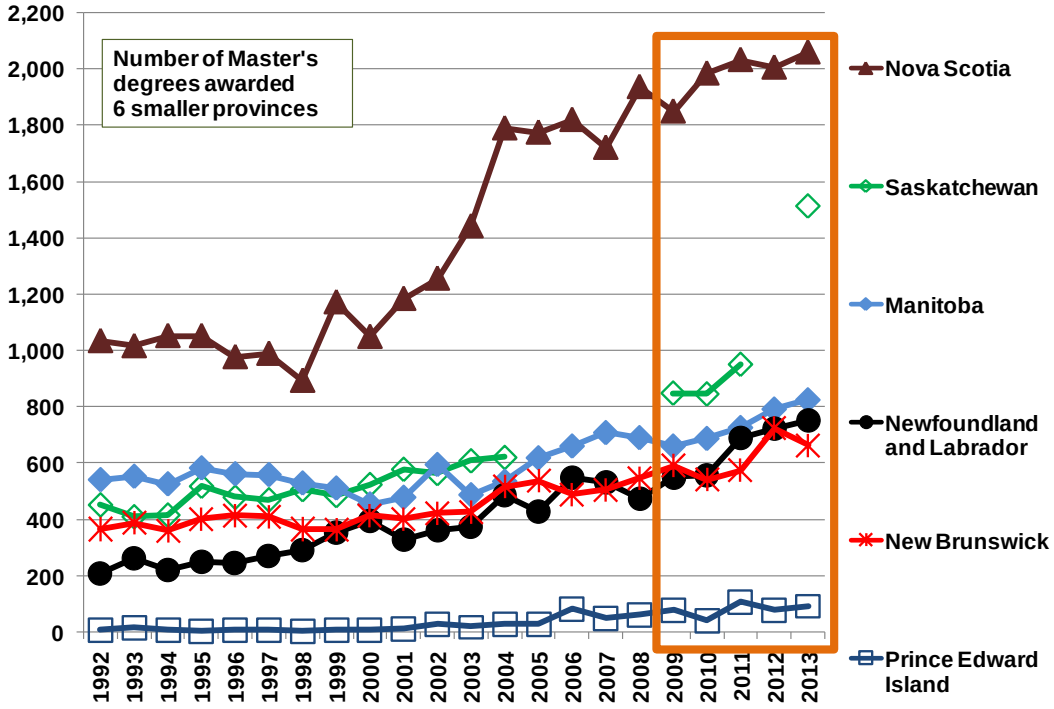
Figure 2.3 – Master's degrees awarded by province, 1992-2013



Note: Saskatchewan data are not shown for 2005 to 2008 due to the lack of data from the University of Regina.
Source: Statistics Canada.

Among the six smaller provinces (see Figure 2.4), Nova Scotia shows the highest numbers of Master's degrees awarded over the time period examined. However, none of these smaller provinces show much of an increase in Master's degree numbers in the most recent years, from 2009 to 2013 (see boxed area in graph).

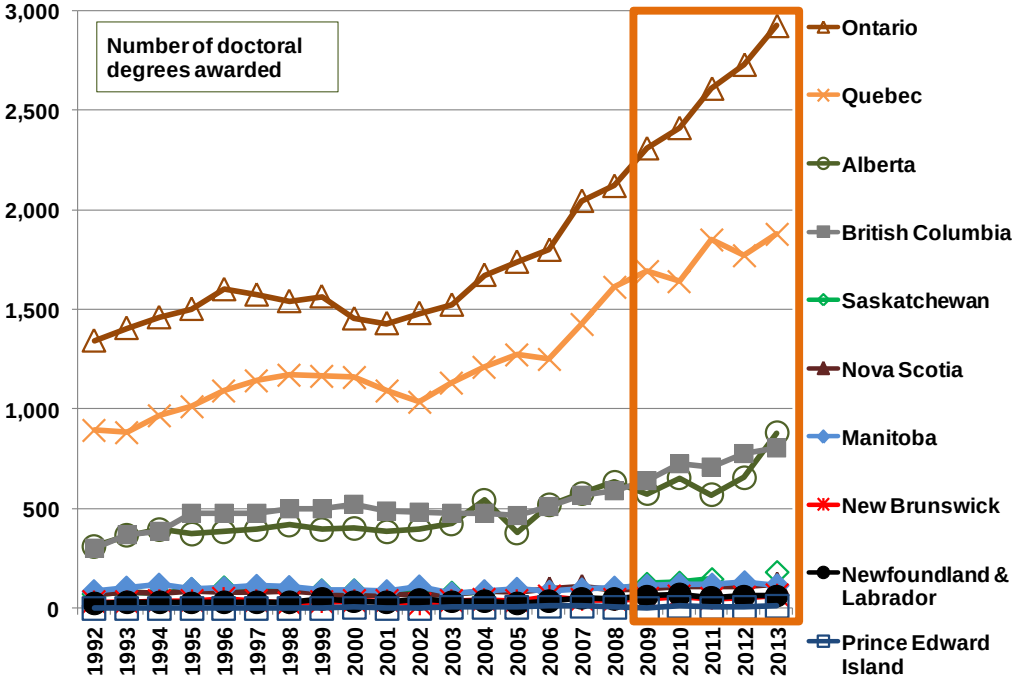
Figure 2.4 – Master's degrees awarded by province, six smaller provinces, 1992-2013



Note: Saskatchewan data are not shown for 2005 to 2008 due to the lack of data from the University of Regina.
Source: Statistics Canada.

While the numbers are lower, again the picture is much the same when we look at numbers of doctoral degrees awarded. As was true for Master's degrees, the provinces with the highest numbers were Ontario and Quebec. Those that have increased most in the years 2009 to 2013 in the number of doctoral degrees awarded are Ontario and Alberta. See boxed area of Figure 2.5.

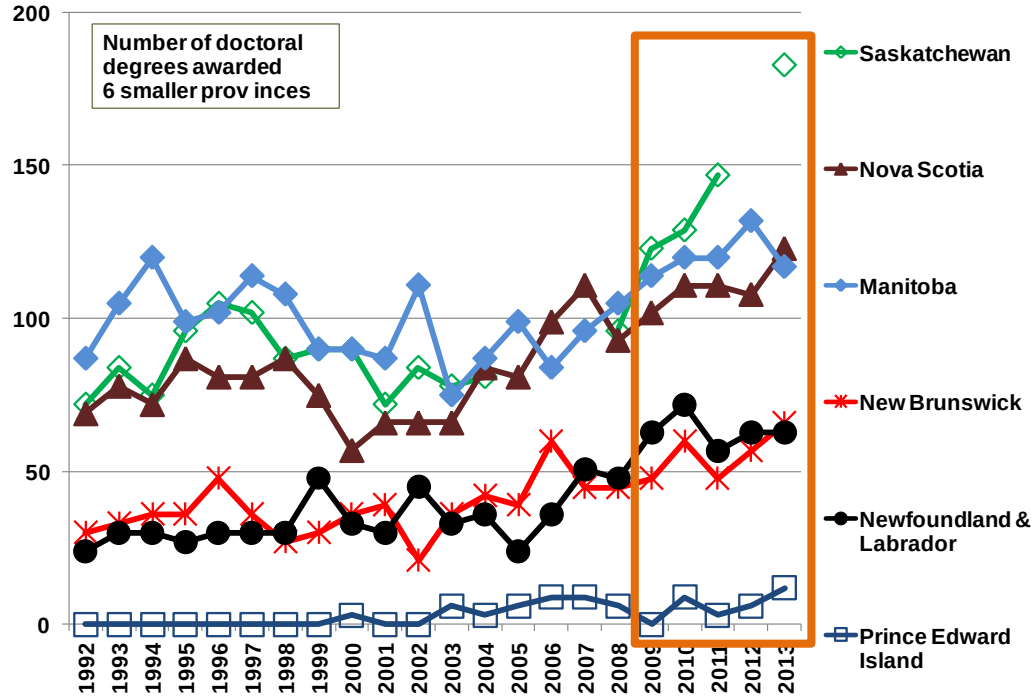
Figure 2.5 – Doctoral degrees awarded by province, 1992-2013



Note: Saskatchewan data are not shown for 2005 to 2008 due to the lack of data from the University of Regina.
Source: Statistics Canada.

Figure 2.6 shows the detail for the six smaller provinces in terms of number of doctoral degrees awarded over time. The numbers bounce around a fair bit, with no clear trend, except for a slight upward (but inconsistent) rise in recent years for Nova Scotia and Prince Edward Island. The pattern for Saskatchewan is very difficult to interpret because of missing data for several years.

Figure 2.6 – Doctoral degrees awarded by province, six smaller provinces, 1992-2013



Note: Saskatchewan data are not shown for 2005 to 2008 due to the lack of data from the University of Regina.
Source: Statistics Canada.

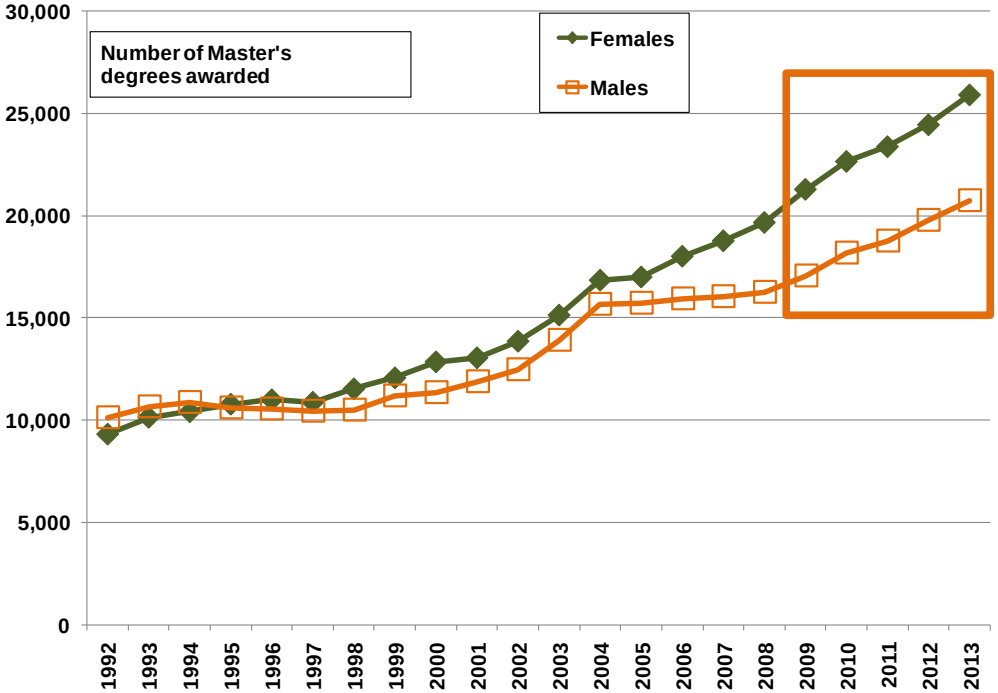
2.4 Graduate degrees awarded by Gender

More females than males have received Master's degrees in Canada since 1995. (Figure 1.5, above, shows that more females than males were enrolled full-time in Maser's programs since 1997.) Again, it is important to note that while there are more females than males graduating with a Master's degree, this does not mean that the number of males graduating has decreased. It has not. The number of males awarded a Master's degree in Canada has increased every year since 1997, reaching a high of 20,754 in 2013. The

number of females has increased virtually every year since 1992 (with a very minor decline from 1995 to 1996). There were 25,923 Master's degrees awarded to females in 2013.

In recent years, from 2009 to 2013, the number of degrees awarded to both males and females has increased, with the rate of increase being somewhat higher for females.

Figure 2.7 – Master's degrees awarded by gender, 1992-2013

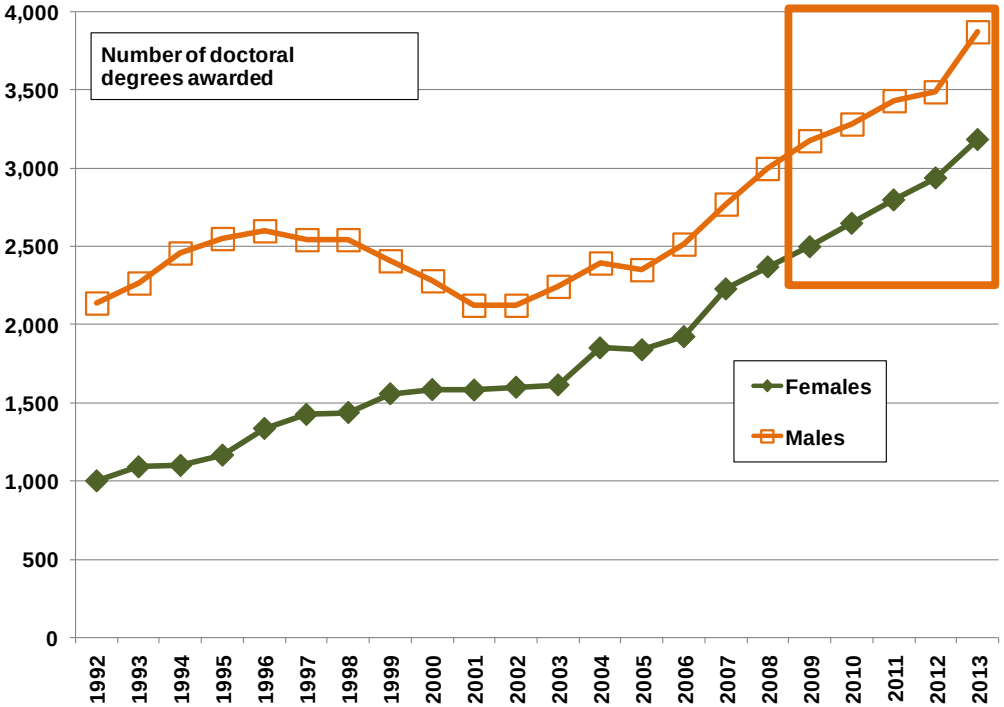


Source: Statistics Canada.

Looking at number of doctoral degrees awarded (Figure 2.8) we see a different pattern. Notably, as was evident with enrolments, females are in a minority. Nevertheless, the number of doctoral degrees awarded to females has risen consistently every year from 1992 to 2013. The number of doctoral degrees awarded to males took a downturn from 1996 to 2001. Despite these patterns and

despite the ongoing increase in Master's degrees awarded to females, shown in Figure 2.7, females do not reach the number of *doctoral* degrees awarded to males in any of the years examined.

Figure 2.8 – Doctoral degrees awarded by gender, 1992-2013



Source: Statistics Canada.

As Table 2.4 shows the percent female among doctoral degrees awarded reached about 44% in 2004. It has been at that rate from that time through to 2013, the latest date for which we have data.

Table 2.4 – Master's and doctoral degrees awarded by percent female, 1992-2013

Percent female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Master's	47.8	48.6	48.8	50.4	50.9	50.9	52.3	51.8	53.0	52.3	52.6	52.1	51.8	51.9	53.1	53.9	54.7	55.5	55.5	55.5	55.2	55.5
Doctoral	31.9	32.5	30.9	31.3	34.0	35.9	36.1	39.3	41.0	42.7	42.9	41.8	43.6	43.9	43.3	44.6	44.2	44.0	44.6	44.9	45.7	45.1

Source: Statistics Canada

Table 2.5 and Table 2.6 give the numbers, by gender, of degrees awarded by province, from 1992 to 2013. The numbers give a more accurate picture here than percent female since the numbers are very small in some provinces (notably in Prince Edward Island) and so percentages can be unstable and misleading.

Focusing on the two provinces with the largest numbers of graduate degrees awarded, Ontario and Quebec, we see that females outnumbered males in Master's degrees awarded Ontario from 1998 to 2013, and in Quebec from 1995 to 2002, and 2007 to 2013.

Table 2.5 – Master's degrees awarded by gender and province, 1992-2013

Master's degree	Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Canada	Male	10,140	10,698	10,902	10,596	10,578	10,461	10,512	11,217	11,391	11,889	12,495	13,905	15,669	15,747	15,927	16,044	16,284	17,061	18,189	18,762	19,800	20,754
	Female	9,294	10,119	10,392	10,761	10,980	10,857	11,514	12,054	12,837	13,038	13,848	15,129	16,839	16,998	18,012	18,771	19,671	21,294	22,662	23,385	24,459	25,923
Nfl'd & Labrador	Male	120	132	117	108	123	129	135	156	174	135	162	168	219	186	240	231	198	237	222	276	288	303
	Female	87	132	105	141	120	141	156	195	219	192	201	207	264	240	306	300	279	309	336	408	435	447
PEI	Male	3	6	6	0	3	6	3	3	6	0	12	3	9	6	33	12	18	12	12	36	30	33
	Female	6	9	3	3	6	0	3	6	6	15	15	15	21	18	51	33	45	66	30	72	48	60
Nova Scotia	Male	462	450	477	447	420	429	399	513	408	444	498	603	729	750	711	621	690	633	720	741	711	789
	Female	570	564	576	609	558	558	495	663	645	741	759	840	1,059	1,023	1,104	1,101	1,248	1,218	1,260	1,293	1,296	1,269
New Brunswick	Male	189	195	198	186	210	201	165	168	198	192	207	216	261	288	225	210	246	264	243	258	351	300
	Female	174	192	165	213	207	204	201	195	213	210	213	213	258	249	264	294	297	327	294	315	375	366
Quebec	Male	3,012	3,117	3,240	3,174	3,279	3,240	3,255	3,294	3,618	3,756	3,969	4,635	4,929	5,172	5,172	4,899	5,103	4,878	5,064	5,169	5,412	5,727
	Female	2,775	2,964	3,234	3,246	3,387	3,333	3,513	3,519	3,852	3,918	3,975	4,368	4,587	4,830	4,752	5,076	5,220	5,292	5,556	5,805	6,240	6,480
Ontario	Male	4,311	4,488	4,572	4,341	4,383	4,254	4,278	4,590	4,575	4,797	4,938	5,442	5,793	6,024	5,790	5,928	6,447	7,053	7,854	8,019	8,418	8,652
	Female	3,870	4,200	4,131	4,209	4,419	4,203	4,569	4,683	4,956	4,992	5,439	5,940	6,432	6,615	6,954	7,164	8,001	8,802	9,597	10,092	10,032	10,362
Manitoba	Male	318	327	303	309	303	279	240	237	207	228	288	225	249	279	273	315	267	267	267	282	330	321
	Female	222	228	219	276	261	279	285	270	246	249	306	264	285	339	387	393	423	393	423	459	477	507
Saskatchewan	Male	258	231	249	297	258	264	267	258	276	294	270	285	279	195	195	195	222	372	363	429	288	597
	Female	198	177	168	219	222	210	240	228	246	285	294	321	342	240	240	240	270	477	483	522	378	912
Alberta	Male	660	741	738	684	639	648	705	816	831	1,020	1,041	1,098	1,350	1,098	1,389	1,473	1,224	1,290	1,377	1,281	1,569	1,665
	Female	621	714	774	819	702	858	873	984	981	1,083	1,101	1,224	1,479	1,365	1,701	1,773	1,581	1,740	1,797	1,533	2,046	2,241
British Columbia	Male	807	1,017	1,002	1,047	957	1,008	1,071	1,182	1,095	1,026	1,107	1,230	1,851	1,746	1,896	2,166	1,872	2,055	2,067	2,271	2,403	2,367
	Female	774	939	1,017	1,029	1,104	1,068	1,176	1,308	1,476	1,353	1,548	1,737	2,115	2,076	2,250	2,391	2,304	2,676	2,889	2,886	3,132	3,282

Source: Statistics Canada

Table 2.6 – Doctoral degrees awarded by gender and province, 1992-2013

Doctoral	Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Canada	Male	2,136	2,265	2,454	2,550	2,595	2,544	2,541	2,409	2,277	2,121	2,124	2,244	2,394	2,346	2,514	2,769	2,994	3,177	3,285	3,429	3,486	3,873
	Female	999	1,089	1,098	1,164	1,335	1,425	1,437	1,557	1,584	1,581	1,599	1,614	1,851	1,839	1,923	2,229	2,370	2,499	2,649	2,799	2,940	3,186
Nfl'd & Labrador	Male	12	21	21	21	24	27	21	39	21	18	30	21	21	18	24	30	24	39	33	30	39	33
	Female	12	9	9	6	6	6	6	6	12	15	15	12	18	9	12	21	21	24	39	27	21	33
PEI	Male	0	0	0	0	0	0	0	0	3	0	0	3	0	6	3	6	3	0	6	3	3	6
	Female	0	0	0	0	0	0	0	0	3	0	0	3	0	0	3	6	3	0	3	0	3	9
Nova Scotia	Male	48	57	45	57	51	54	54	42	33	33	42	42	48	54	60	60	51	57	57	66	66	69
	Female	21	21	27	27	30	27	33	33	24	33	24	27	33	27	39	51	42	45	57	42	39	54
New Brunswick	Male	18	27	30	33	39	30	21	21	24	27	12	21	24	21	33	30	27	30	33	27	30	42
	Female	9	6	6	6	12	9	6	6	12	15	9	15	15	18	24	18	21	21	27	21	24	24
Quebec	Male	624	606	669	693	738	753	759	717	675	627	570	666	696	726	723	789	876	942	879	1,002	945	1,044
	Female	273	276	300	324	357	390	414	453	489	468	465	468	522	552	531	642	741	750	762	849	831	834
Ontario	Male	885	933	1,008	1,014	1,017	1,005	981	897	831	810	834	894	927	972	1,011	1,146	1,239	1,281	1,329	1,437	1,494	1,557
	Female	462	477	459	492	588	573	567	675	630	621	651	630	750	768	792	906	888	1,032	1,086	1,173	1,272	1,371
Manitoba	Male	63	84	81	72	66	75	72	54	54	57	63	48	51	57	48	63	57	72	69	72	75	69
	Female	24	21	39	27	36	42	36	36	36	30	48	30	33	45	36	33	48	45	51	51	57	48
Saskatchewan	Male	54	66	54	72	81	84	63	69	63	42	60	60	48	33	33	33	45	72	72	90	48	96
	Female	18	18	18	24	21	21	27	21	30	27	21	18	33	30	30	30	51	54	57	60	39	84
Alberta	Male	225	237	279	264	255	228	255	255	243	213	234	237	303	213	306	309	354	321	399	300	354	522
	Female	90	132	120	111	135	171	165	141	162	177	162	186	243	171	213	270	282	255	252	270	306	360
British Columbia	Male	204	240	267	327	327	288	318	315	330	291	279	252	273	249	273	306	318	360	411	402	429	432
	Female	96	129	123	144	147	189	183	186	189	195	201	225	204	213	237	258	273	282	312	306	348	369

Source: Statistics Canada

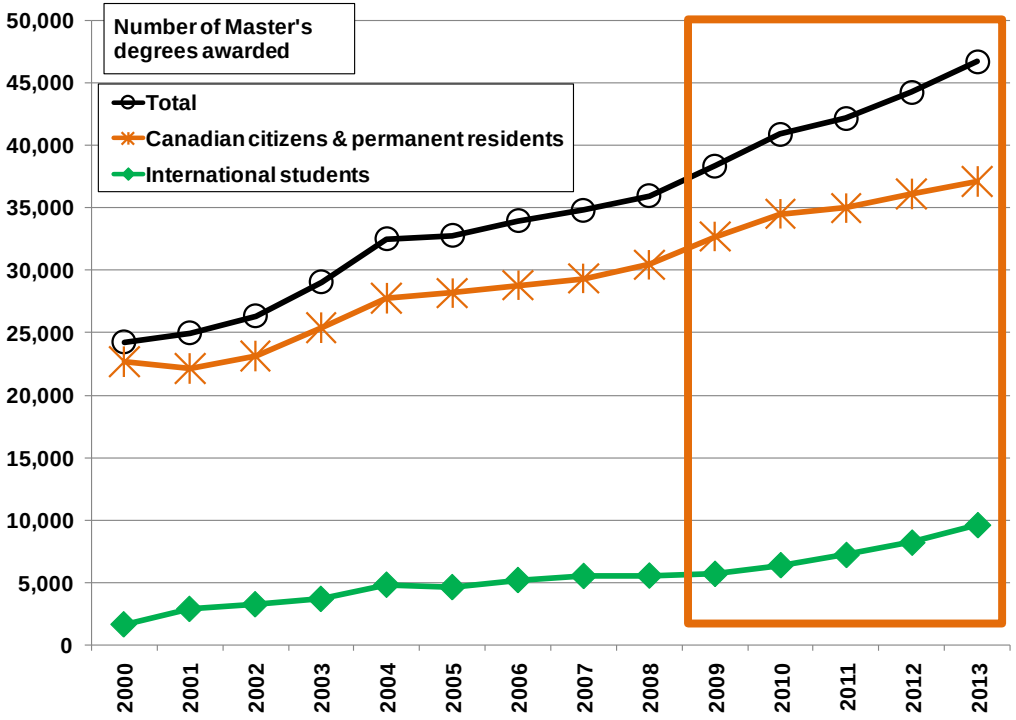
We saw earlier that a consistently lower number of females as compared to males were awarded doctoral degrees in the years 1992 to 2013 in Canada as a whole. There are essentially no exceptions to this statement when one examines provincial level data (Table 2.6). There are a few instances where the numbers of females and males are the same (Nova Scotia in 2001 and 2010, Newfoundland and Labrador in 2013). There are two years when the number of females reported to have been awarded doctoral degrees is slightly higher (Newfoundland and Labrador in 2010 and Saskatchewan in 2008). However, the numbers are sufficiently close that they are subject to rounding errors. Nevertheless, it is clear that in some provinces, especially some of the smaller provinces the gender balance in doctoral degrees awarded is close to 50% at times.

2.5 Graduate degrees awarded by International student status

The pattern of degrees granted to international students parallels the pattern of graduate enrolments of these students. Figure 2.9 to Figure 2.12 show the relevant results.

Looking first at Master's degrees awarded (Figure 2.9 and Figure 2.11), there has been an increase in the number of Master's degrees awarded to international students since 2008, with the size of that increase getting larger every year until 2013. During the same time period, the number of Master's degrees awarded to Canadian citizens and permanent residents also increased, but less consistently. The rate of increase in doctoral degrees awarded to Canadian citizens and permanent residents has been 4% or less in all years since 2010 (except for the higher rate of change in 2013).

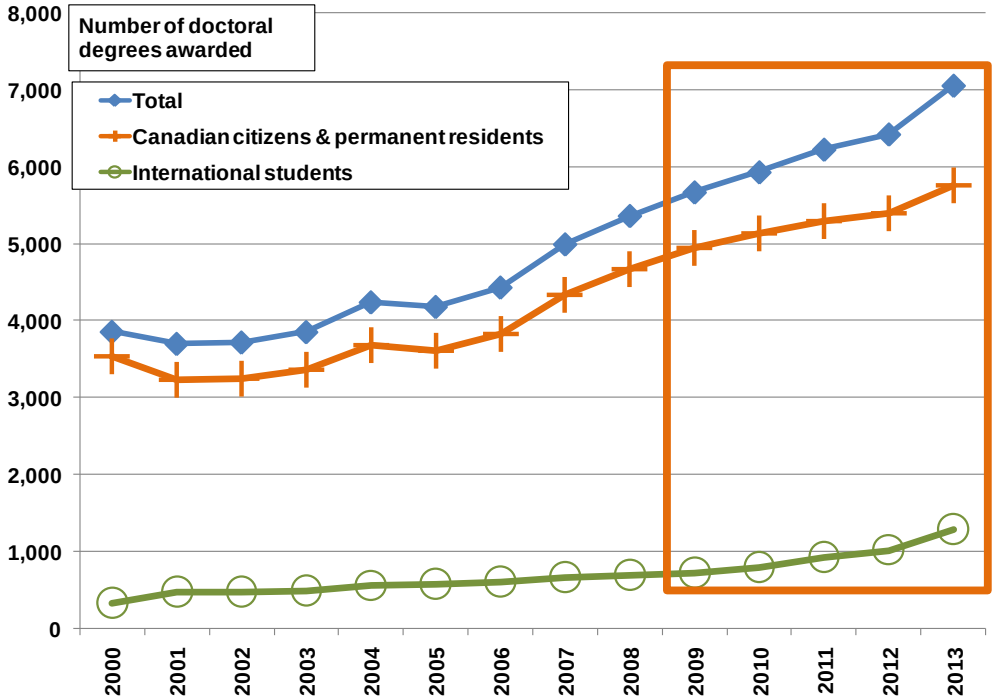
Figure 2.9 – Master's degrees awarded by international student status, 2000-2013



Source: Statistics Canada.

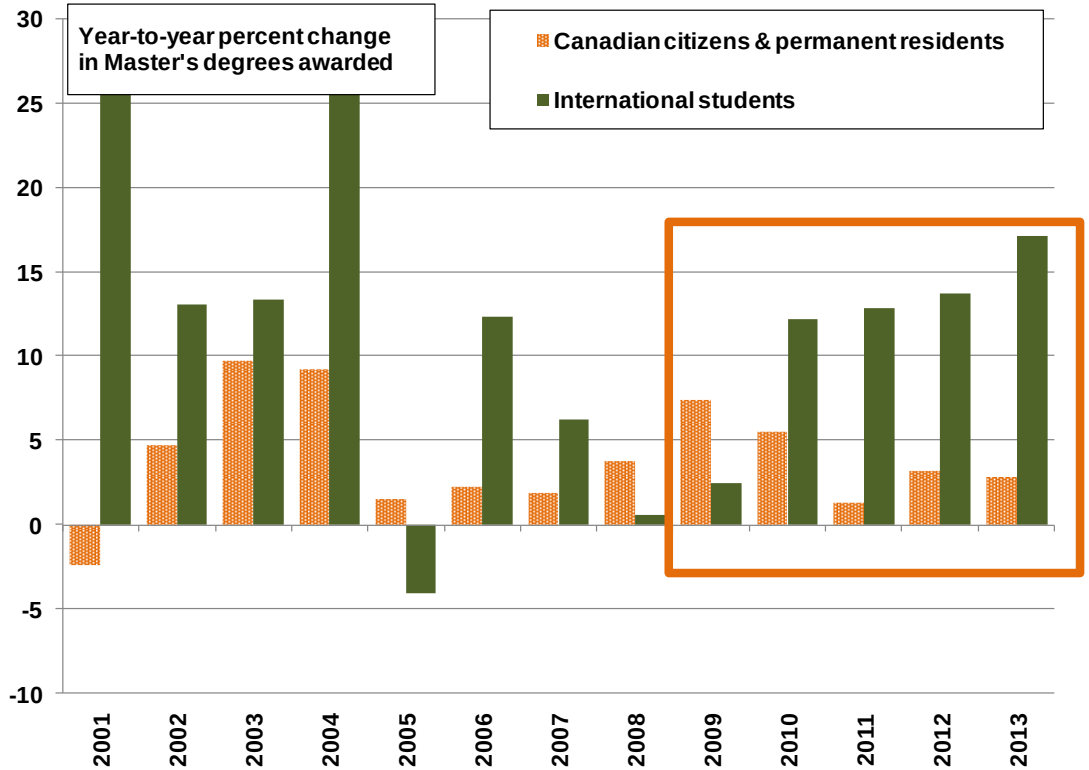
The absolute number of doctoral degrees awarded to international students is quite low; only in 2012 and 2013 did that number exceed 1,000 degrees. That said, the rate of increase in the number of doctoral degrees awarded to international students has been greater than the rate of increase for Canadian citizens and permanent residents every year from 2010 to 2013. Figure 2.10 and Figure 2.12 provide the relevant details.

Figure 2.10 –Doctoral degrees awarded by international student status, 2000-2013



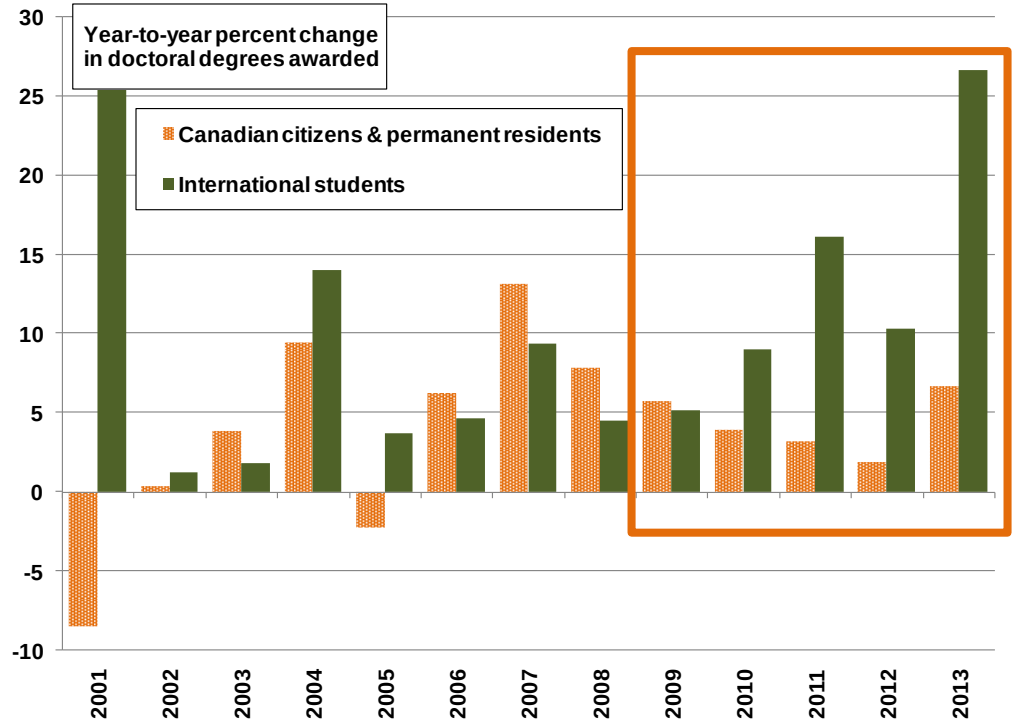
Source: Statistics Canada.

Figure 2.11 – Master's degrees granted per year, annual percent change by international student status, 2000-2013



Source: Statistics Canada.

Figure 2.12 - Doctoral degrees granted per year, annual percent change by international student status, 2000-2013



Source: Statistics Canada.

2.6 Graduate degrees awarded by International student status and Gender

If we look at the gender split among degrees granted by international student status, we get the results in Table 2.7.

There are a few points to note from this table. First of all, as was true of graduate enrolments, the percent female among international students to whom graduate degrees were awarded is consistently lower than among Canadian citizens and permanent residents, and hence among the total graduate degrees awarded.

Secondly note that the percent female varies little from 2000 to 2013, the years for which this information is available from Universities Canada. For Master's degrees, 52% to 56% of all degrees granted went to females, every year from 2000 to 2013. The percent female among degrees granted to international students was consistently between 39% to 43% during those years. For doctoral degrees granted, the comparable numbers were: percent female among *all* degrees granted ranged from 41% to 45% in all years 2000 to 2013. The percent female among doctoral degrees granted to international students ranged between 30% and 35%.

Any pattern of an increase in the percent female is seen only for the "total" figures. There is basically no increase in the percent female for international students who were awarded graduate degrees, if one compares the year 2000 to the year 2013.

Table 2.7 – Master's and doctoral degrees awarded by international student status, percent female, 2000-2013

% female		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Master's	Total	53.0	52.3	52.6	52.1	51.8	51.9	53.1	53.9	54.7	55.5	55.4	55.5	55.2	55.5
	International students	43.2	40.4	41.7	41.0	40.4	40.6	39.0	40.2	40.4	40.2	41.7	40.4	39.4	42.1
Doctoral	Total	41.0	42.7	42.9	41.8	43.6	43.9	43.3	44.6	44.2	44.1	44.6	44.9	45.8	45.1
	International students	32.4	33.3	30.4	34.8	29.9	30.4	31.0	31.1	33.6	32.0	33.8	34.3	34.6	33.3

Source: Statistics Canada

2.7 Graduate degrees awarded by Main field of study

The fields with a high number of Master's degrees granted are, not surprisingly, mostly the same ones for which we saw high levels of enrolments (see Figure 1.11, above and Figure 2.13). That is:

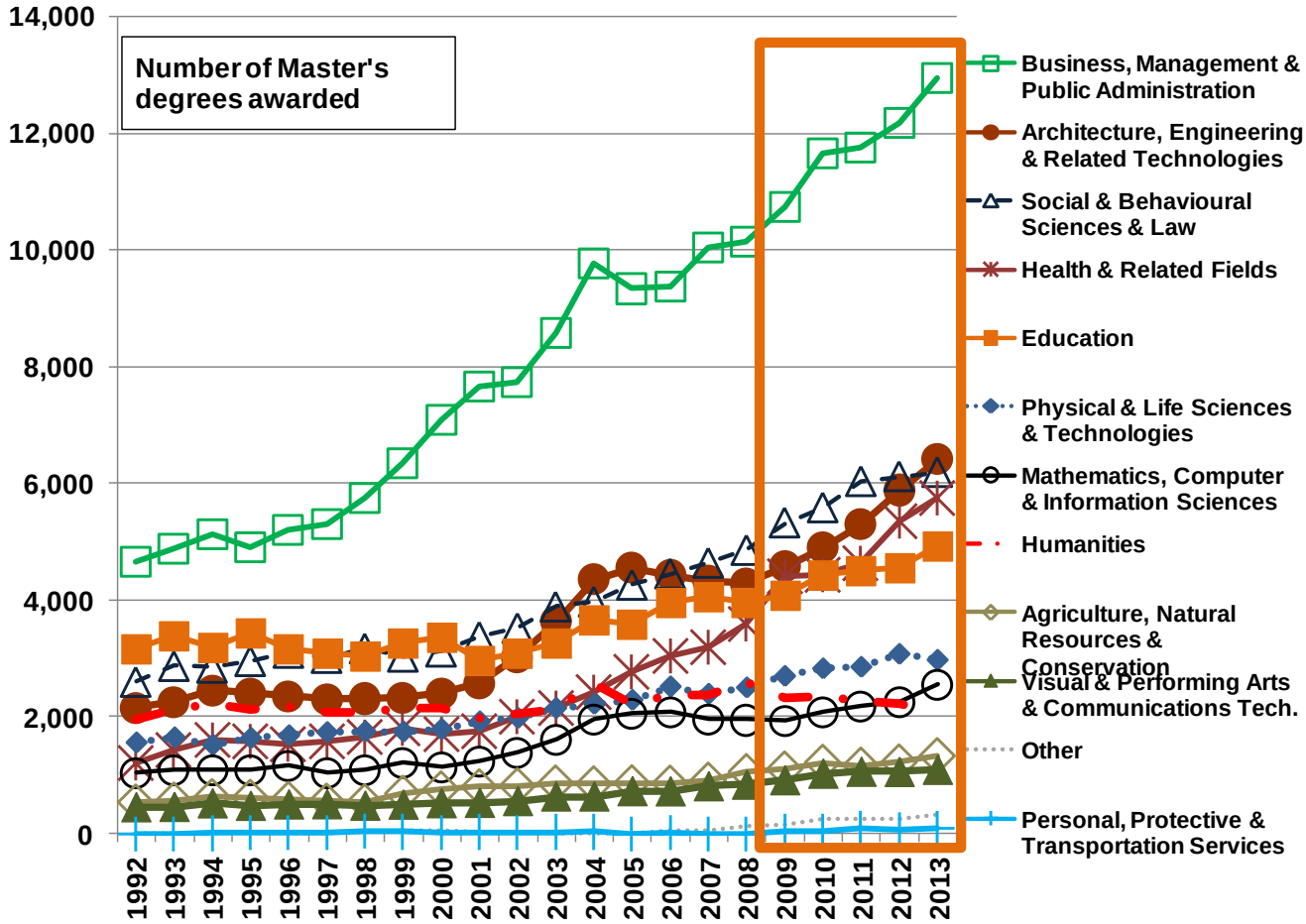
- Business, Management, and Public Administration;
- Architecture, Engineering and Related Technologies,
- Social and Behavioural Sciences and Law and
- Health and Related Fields.

The number of Master's degrees awarded was also high in Education. See Figure 2.13.

Looking in more detail at the most recent five years for which we have data (the boxed area in the graph), it is clear that the number of degrees awarded in Business, Management, and Public Administration is not only high, it continues to increase. In 2009, 10,740 Master's degrees were awarded to those in this general field; by 2013 that number had risen to 12,942 – 28% of all Master's degrees granted in Canada that year.

Below Business, Management, and Public Administration in numbers of Master's degrees awarded is a cluster of four fields: Architecture, Engineering and Related Technologies; Social and Behavioural Sciences and Law; Health and Related Fields; and Education. Focusing on the years from 2009 to 2013, there is an increase in Architecture, Engineering and Related Technologies (from 4,584 to 6,411) and Health and Related Fields (from 4,413 to 5,742). The other two fields (Social and Behavioural Sciences and Law, and Education) had slight increases that from 2009 which off by 2013 (going from 5,325 to 6,186, and from 4,074 to 4,929 respectively).

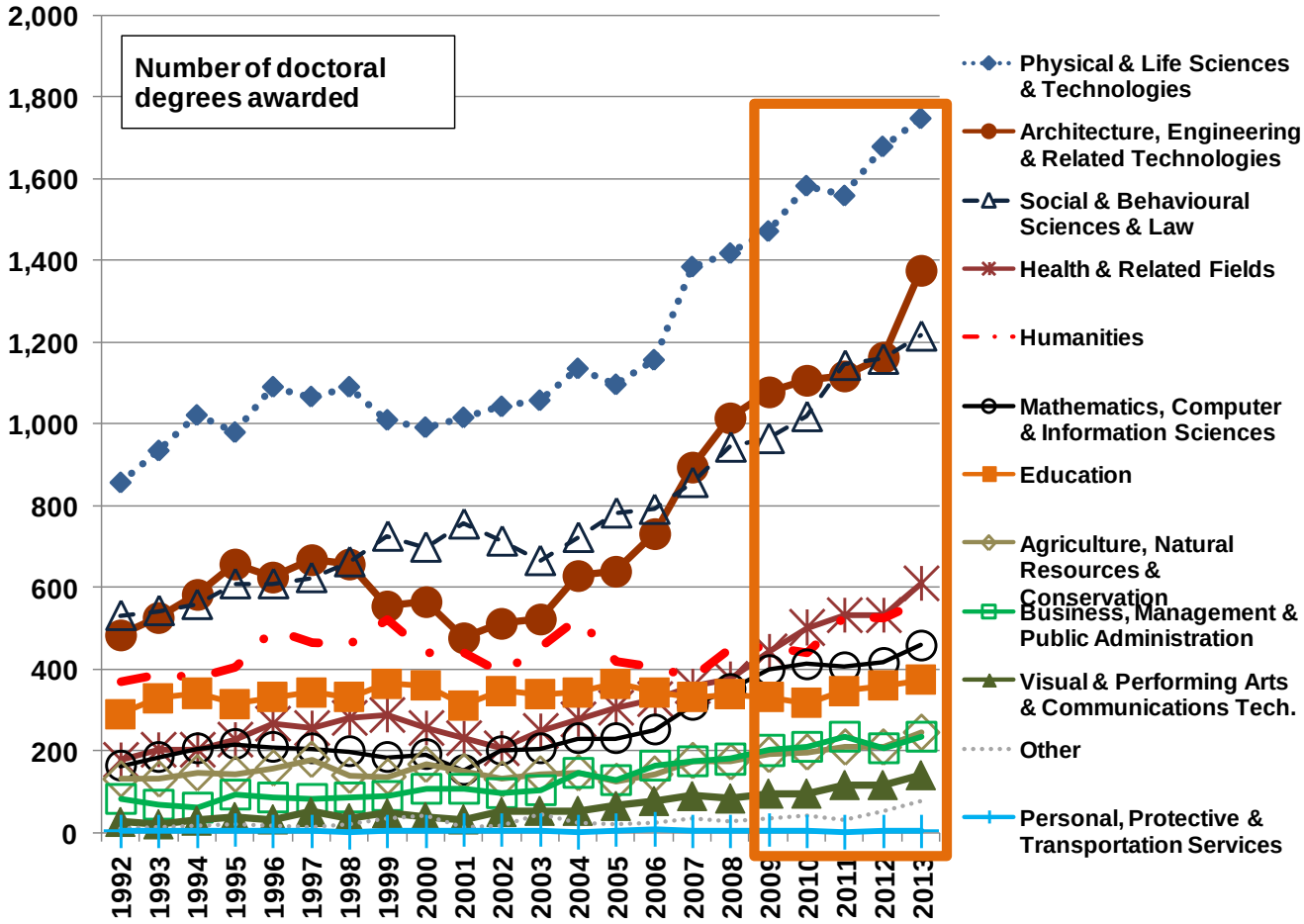
Figure 2.13 – Master's degrees awarded by main field of study, 1992-2013



Source: Statistics Canada.

There is a somewhat different pattern for numbers of doctoral degrees granted over time. See Figure 2.14.

Figure 2.14 – Doctoral degrees awarded by main field of study, 1992-2013



Source: Statistics Canada.

For doctoral degrees granted, the largest field of study since 1992, in terms of number of degrees granted, has been Physical and Life Sciences and Technologies. This dominance continued in the most recent five year period we are considering, from 2009 to 2013. During that period this field went from 1,473 degrees awarded to 1,749.

The fields of study with the next most numerous degrees awarded during that five year time period are: Architecture, Engineering and Related Technologies, and Social and Behavioural Sciences and Law. The first of these went from 1,107 degrees awarded in 2009 to 1,377 in 2013. The corresponding numbers for Social and Behavioural Sciences and Law are: 966 in 2009 to 1,218 in 2013.

The lines in Figure 2.14 show that there was a slight increase from 2009 to 2013 in the number of doctoral degrees granted in virtually all fields, including some with relatively small numbers of graduates.

2.8 Graduate degrees awarded by Main field of study and Gender

Continuing the focus on gender patterns, the next step is to look at how the degrees awarded to males and females differ by main field of study. Table 2.8 and Table 2.9 give the relevant results. These tables are arranged so those fields of study with the highest percent female in 2013 are at the top.

As we saw in Table 2.4, 56% of Master's degrees granted in 2013 were awarded to females. Table 2.8 shows those fields with a higher percent female than this in Master's degrees awarded in 2013 are:

- Health and related fields (77%),
- Education (75),
- Social and behavioural sciences and law (65%),
- Other instructional programs (65%),
- Visual and performing arts, and communications technologies (61%) and
- Agriculture, natural resources and conservation (50%).

Those with a lower percent female than the Canadian average for all fields are:

- Architecture, engineering and related technologies (29%),
- Personal, protective and transportation services (42%),
- Mathematics, computer and information sciences (43%) and
- Business, management and public administration (48%).

What is more, the relative order of these fields over time is quite consistent. There are few reversals in the order of which has the higher or lower percent female, except for the fields "Other instructional programs" – which is hard to interpret, and Personal, protective and transportation services which has very small numbers and so unstable percentages.

Table 2.8 – Master's degrees awarded by percent female in main fields of study, 1992-2013, ranked by percent female in 2013

Percent female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
All fields	47.8	48.6	48.8	50.4	50.9	50.9	52.3	51.8	53.0	52.3	52.6	52.1	51.8	51.9	53.1	53.9	54.7	55.7	55.5	55.6	55.4	55.6
Health and related fields	68.9	69.5	68.8	71.8	70.5	70.5	71.8	72.4	72.8	75.5	76.1	76.1	76.4	77.8	78.1	78.2	80.8	78.3	78.5	77.4	78.3	77.2
Education	69.3	70.1	70.6	72.2	73.8	71.8	74.3	72.5	73	73.8	73.9	74.4	73.8	71.5	72.4	75.9	74.5	76.3	74.6	75.4	77.3	75.0
Social and behavioural sciences and law	52.2	52.2	54.0	53.2	55.5	55.8	57.9	58.9	59.8	60.5	60.7	62.0	62.6	62.9	62.8	63.5	63.9	64.7	64.7	64.8	64.3	65.3
Other instructional programs	66.7	75.0	77.8	72.7	57.1	55.6	50.0	58.3	60.9	70.6	72.2	71.4	71.4	60.0	73.7	65.4	56.8	54.7	60	58.3	53.7	64.8
Visual and performing arts, and communications technologies	59.1	59.6	59.1	63	58.8	63.7	60.1	63.3	61.6	66.5	63.0	66.0	57.7	60.8	61.1	62.6	65.6	61.6	64.2	60.8	59.9	60.6
Agriculture, natural resources and conservation	42.0	42.2	38.2	44.7	45.9	45.2	53	54.1	53.5	50.7	54.7	55.5	56.8	55.0	56.7	61.1	59.4	61.1	60.1	59.4	58.3	60.1
Humanities	51.9	53.3	53.3	53.7	53.6	53.1	55.9	54.8	58.3	57.7	56.7	57.6	57.5	57.8	59.0	55.7	57.4	58.0	57.7	58.1	59	57.9
Physical and life sciences and technologies	39.1	40.3	42.8	41.2	45.3	45.4	48.1	47.3	48.1	51.2	53.8	52.0	53.2	55.4	55.6	54.5	53.3	55.1	55	54.2	51.8	53.8
Business, management and public administration	40.1	40.3	40.2	42.3	42.6	43.4	43.6	42.9	44.4	42.8	43.4	42.4	42.9	42.4	43.5	44.1	44.8	45.7	46.6	47.0	47.1	47.7
Mathematics, computer and information sciences	46.0	47.4	44.7	45.5	46.6	44.5	46.2	40.5	43.3	43.2	43.3	45.0	43.9	40.4	42.2	40.1	43.8	42.2	42.7	44.5	41.5	43.4
Personal, protective and transportation services *	33.3	0	50.0	50.0	0	25.0	16.7	30.0	11.1	75/0	33.3	100	200	25.0	60.0	22.2	0	30.4	20.6	40.0	26.3	42.1
Architecture, engineering and related technologies	18.4	18.4	21.4	22.7	23.9	25	25.6	26.1	28.9	28.2	27.3	27.3	27.5	28.4	27.6	29.6	28.4	28.1	28.6	28.4	27.8	28.7

Source: Statistics Canada * Note that the numbers for Personal, protective and transportation services are very small, so the percent female is unstable.

Table 2.9 shows the equivalent pattern for doctoral degrees granted by main field of study. For doctoral programs, the main field with the highest percent female among degree recipients in 2013 was Education (73% compared to 45% for all fields). This is followed by Social and behavioural sciences and law (64%), Other instructional programs (62%), Health and related fields (60%), Visual and performing arts, and communications technologies (55%), Humanities (50%) and Agriculture, natural resources and conservation (49%).

Those fields of study showing a percent female less than the Canadian average for all fields in 2013 (43%) were the same for doctoral degrees awarded as for Master's degrees awarded. That is: Architecture, engineering and related technologies (19%), Mathematics, computer and information sciences (26%) and Business, management and public administration (41%).

In other words, while females make up more than half of all Master's graduates, and 45% of doctoral graduates, there are still some persisting and persistent gender differences in fields of study of these graduates.

Table 2.9 – Doctoral degrees awarded by percent female in main fields of study, 1992-2013, ranked by percent female in 2013

Percent female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
All fields	31.9	32.4	30.9	31.3	34.0	35.9	36.1	39.3	41.0	42.7	42.9	41.8	43.6	43.9	43.3	44.6	44.2	44.1	44.6	44.9	45.8	45.1
Education	55.7	57.3	56.1	56.2	61.3	63.5	64.0	63.9	70.8	69.2	70.7	66.4	69.6	66.4	71.3	70.3	68.1	69.4	66.0	72.4	70.0	72.8
Social and behavioural sciences and law	45.8	45.9	45.7	45.3	46.3	52.9	51.6	52.9	53.2	57.5	56.3	57.2	60.2	60.5	59.5	59.1	60.6	62.7	62.1	61.3	64.6	63.5
Other instructional programs	50.0	40.0	50.0	50.0	33.3	40.0	62.5	75.0	64.3	60.0	50.0	62.5	66.7	50.0	44.4	58.3	60.0	66.7	57.1	72.7	66.7	61.5
Health and related fields	37.3	43.3	44.8	36.0	44.3	55.3	46.2	47.9	48.2	48.1	55.9	53.0	56.5	53.5	57.4	61.3	58.4	61.2	60.5	61.6	58.8	60.1
Visual and performing arts, and communications technologies	55.6	71.4	40.0	38.5	45.5	47.1	41.7	56.3	53.8	63.6	58.8	61.1	61.1	54.5	50.0	53.3	46.4	53.1	56.3	53.8	51.3	55.3
Humanities	37.4	45.7	38.9	40.0	44.0	46.5	44.2	43.7	49.7	53.1	47.7	48.3	46.9	47.9	48.9	50.4	45.3	48.3	54.8	48.9	49.7	49.7
Agriculture, natural resources and conservation	20.5	25.0	16.3	27.1	22.6	28.3	27.7	37.0	35.7	34.0	27.3	39.6	34.7	42.9	39.6	40.7	48.3	45.3	42.4	41.4	48.6	48.8
Physical and life sciences and technologies	26.9	26.6	26.7	27.2	29.9	28.9	29.9	32.6	34.4	34.8	37.6	35.7	39.3	40.2	39.6	44.2	41.6	40.5	43.2	42.5	43.2	43.9
Business, management and public administration	39.3	30.4	33.3	32.3	27.6	35.7	41.4	36.7	41.7	41.7	42.4	37.1	44.9	39.5	45.5	43.1	51.7	44.8	45.7	43.6	47.8	41.0
Mathematics, computer and information sciences	14.5	11.3	14.5	19.4	15.7	15.9	21.2	19.4	17.2	21.6	20.9	18.8	26.0	23.4	22.6	27.9	25.6	30.1	23.2	25.9	23.7	26.1
Architecture, engineering and related technologies	11.2	8.5	7.2	9.6	11.0	9.9	11.0	13.5	15.4	15.1	18.7	16.1	16.2	16.9	16.0	17.4	22.4	19.4	20.4	20.0	20.9	18.5
Personal, protective and transportation services	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: Statistics Canada

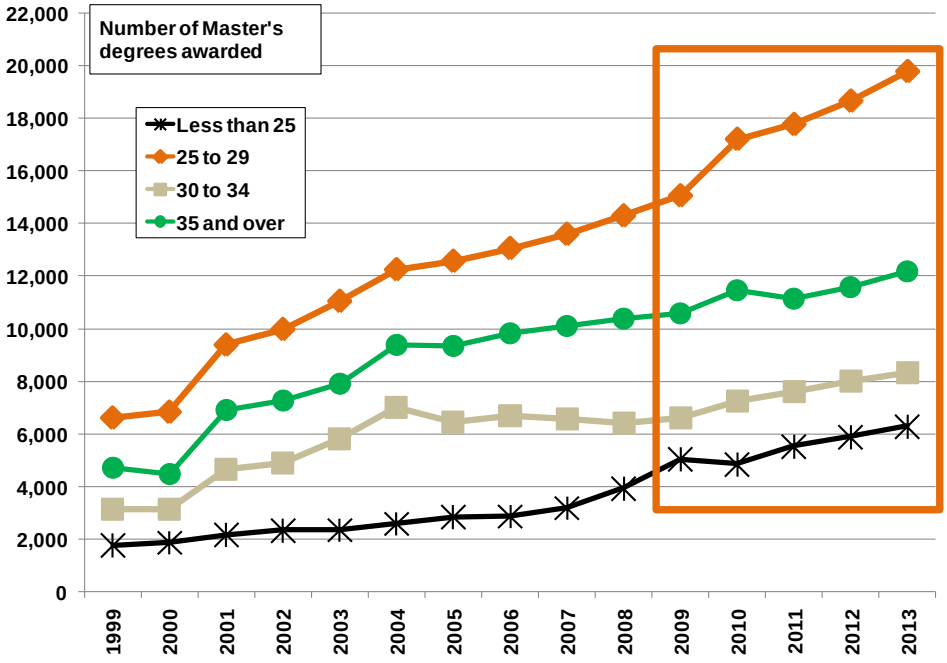
2.9 Graduate degrees awarded by Age groups

The next section examines the distribution of degrees awarded by age groups. See Figure 2.15 and Figure 2.16.

We first consider master's degrees awarded by age group. While the youngest age groups dominated Master's level *enrolments* (see Figure 1.15, above), it is a slightly older age group (those 25 to 29 years of age) who dominate the numbers of Master's degrees awarded. Next is the oldest age group, those 35 years of age and over. In any given year, fewer of those in the youngest age group (those under 25 years of age) are awarded Master's degrees, compared to the other age groups.

Nonetheless, all four age groups show an increase in the years 2009 to 2013.

Figure 2.15 – Master's degrees awarded by age groups, 1999-2013

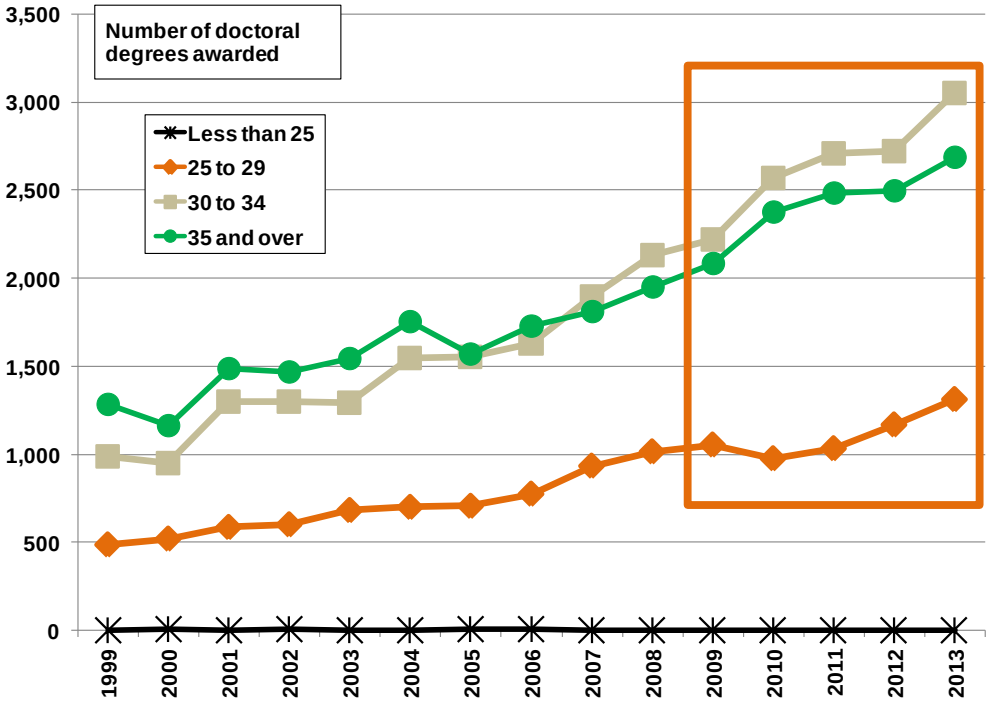


Source: Statistics Canada.

The picture is again different for doctoral degrees awarded. Virtually no degrees were awarded to those in the youngest age group (those under the age of 25). The two oldest age groups (those 30 to 34 years of age, and those 35 years of age and over) tend to dominate the numbers of doctoral degrees awarded. See Figure 2.16. As of 2005 those aged 30 to 35 were the most numerous among those awarded doctoral degrees.

We saw earlier that the number of doctoral degrees awarded has been increasing over the recent period, 2009 to 2013 (see Figure 2.1). This increase is reflected in the upward trajectory of all the lines in Figure 2.16 representing the three older age groups which are represented among these degree recipients.

Figure 2.16 – Doctoral degrees awarded by age groups, 1999-2013



Source: Statistics Canada.

2.10 Graduate degrees awarded by Age groups and Gender

Table 2.10 gives the numbers of males and females who were awarded Master's and doctoral degrees in Canada, from 1999 to 2013 by age group.

Table 2.10 - Number of Master's and doctoral degrees awarded by gender and age groups, 1999-2013

		Master's				Doctoral			
Year	Gender	Less than 25 years	25 to 29 years	30 to 34 years	35 years & over	Less than 25 years	25 to 29 years	30 to 34 years	35 years & over
1999	Male	783	3,174	1,686	2,199	0	297	633	756
	Female	978	3,456	1,470	2,544	0	192	357	537
2000	Male	750	3,231	1,650	2,025	0	333	606	651
	Female	1,119	3,621	1,500	2,469	0	189	348	519
2001	Male	885	4,347	2,454	3,288	0	360	771	807
	Female	1,281	5,061	2,193	3,639	0	225	531	687
2002	Male	942	4,503	2,622	3,546	0	360	786	792
	Female	1,395	5,496	2,298	3,744	0	243	516	687
2003	Male	966	4,983	3,054	3,996	0	429	762	864
	Female	1,383	6,087	2,760	3,945	0	252	531	684
2004	Male	1,047	5,685	3,741	4,578	0	414	888	963
	Female	1,542	6,585	3,273	4,824	0	291	663	792
2005	Male	1,134	5,718	3,447	4,764	0	393	903	870
	Female	1,713	6,879	3,039	4,602	0	315	651	702
2006	Male	1,143	5,811	3,462	4,881	0	426	999	939
	Female	1,731	7,269	3,264	4,962	0	354	633	789
2007	Male	1,281	6,063	3,249	4,860	0	486	1,098	1,005
	Female	1,905	7,554	3,342	5,259	0	450	801	798
2008	Male	1,518	6,267	3,126	5,019	0	561	1,233	1,050
	Female	2,424	8,058	3,291	5,376	0	456	900	909
2009	Male	1,905	6,462	3,213	5,034	0	582	1,299	1,131
	Female	3,138	8,619	3,429	5,574	0	474	918	960
2010	Male	1,878	7,377	3,411	5,517	0	522	1,455	1,311
	Female	2,982	9,855	3,855	5,964	0	459	1,122	1,074
2011	Male	2,145	7,986	3,579	5,025	0	567	1,584	1,281
	Female	3,399	9,801	4,038	6,129	0	465	1,128	1,209
2012	Male	2,289	8,379	3,795	5,268	0	606	1,521	1,335
	Female	3,603	10,248	4,191	6,312	0	564	1,203	1,158
2013	Male	2,421	8,883	3,864	5,583	0	714	1,725	1,434
	Female	3,897	10,923	4,485	6,615	0	600	1,326	1,254

Source: Statistics Canada * Note: There were no doctoral degrees awarded to anyone 25 and under

The age group patterns evident in Figure 2.15 and Figure 2.16 are repeated for both males and females. As Table 2.11 shows, Master's degree recipients among the two younger age groups have been more than 50% female in all years reported. Degree recipients among the two older age groups were 50% female since 2007 (for those 30-34 years of age) and since 2006 (for those 35 years of age and over).

As we saw in Figure 2.8, at no point, and for no age group, were doctoral degree recipients fifty percent female or more.

Table 2.11 –Master's and Doctoral degrees awarded, percent female by age groups, 1999-2013

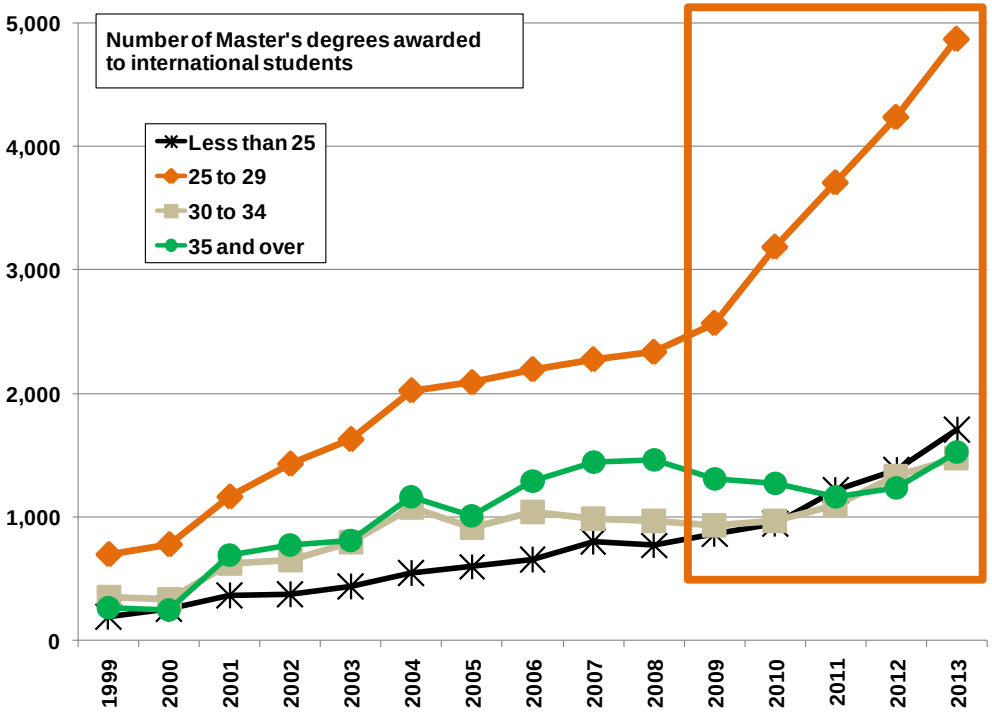
Percent female		Master's				Doctoral		
Year	Less than 25 years	25 to 29 years	30 to 34 years	35 years and over	Less than 25 years*	25 to 29 years	30 to 34 years	35 years and over
1999	55.5	52.1	46.6	53.6	--	39.3	36.1	41.5
2000	59.9	52.8	47.6	54.9	--	36.2	36.5	44.4
2001	59.1	53.8	47.2	52.5	--	38.5	40.8	46.0
2002	59.7	55.0	46.7	51.4	--	40.3	39.6	46.5
2003	58.9	55.0	47.5	49.7	--	37.0	41.1	44.2
2004	59.6	53.7	46.7	51.3	--	41.3	42.7	45.1
2005	60.2	54.6	46.9	49.1	--	44.5	41.9	44.7
2006	60.2	55.6	48.5	50.4	--	45.4	38.8	45.7
2007	59.8	55.5	50.7	52.0	--	48.1	42.2	44.3
2008	61.5	56.3	51.3	51.7	--	44.8	42.2	46.4
2009	62.2	57.2	51.6	52.5	--	44.9	41.4	45.9
2010	61.4	57.2	53.1	51.9	--	46.8	43.5	45.0
2011	61.3	55.1	53.0	54.9	--	45.1	41.6	48.6
2012	61.2	55.0	52.5	54.5	--	48.2	44.2	46.5
2013	61.7	55.1	53.7	54.2	--	45.7	43.5	46.7

Source: Statistics Canada * Note: There were no doctoral degrees awarded to anyone 25 and under

2.11 Graduate degrees awarded by Age groups and International student status

The next section looks at the age distribution of international students to whom degrees were awarded in Canada, in the years 1999 to 2013. Figure 2.17 shows the pattern for Master's degrees granted and Figure 2.18 for doctoral degrees granted.

Figure 2.17 – Master's degrees awarded to international students by age groups, 1999-2013

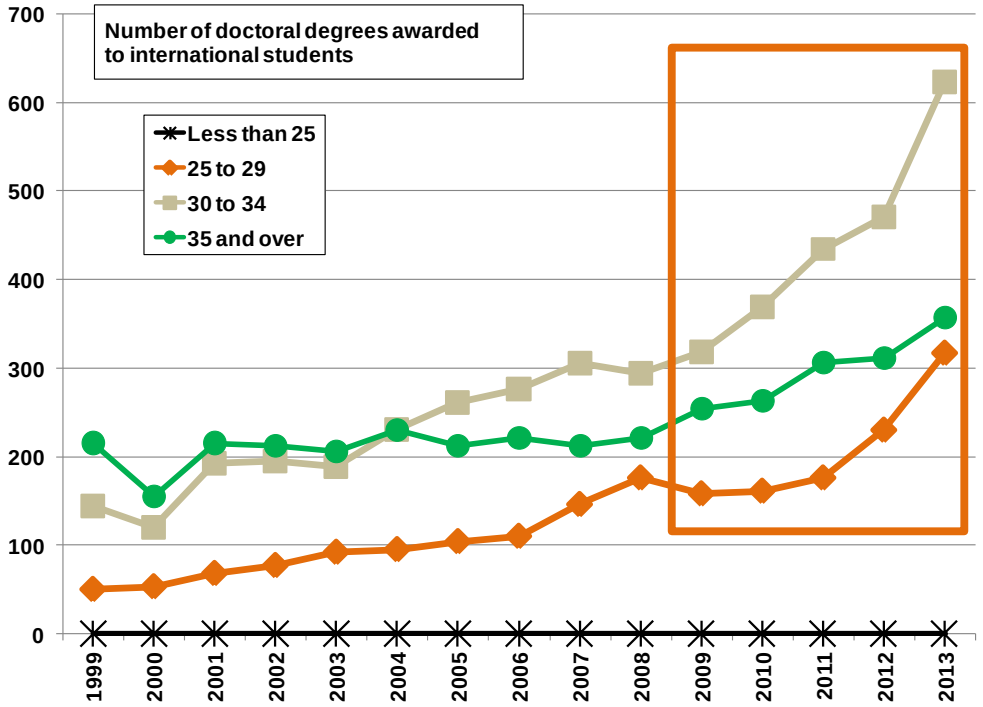


Source: Statistics Canada.

Looking first at Master's degrees awarded, it is clear that the numbers granted to international students in all age groups has increased since 1999. Focusing on the most recent five year period, 2009 to 2013, there is an increase for all age groups except the oldest, aged

35 years and over. Most dramatic is the increase in this five year time period is the number of Master's degrees awarded to international students aged 25 to 29 years. The number of degrees awarded went from 2,371 in 2009 to 4,875 in 2013.

Figure 2.18 – Doctoral degrees awarded to international students by age groups, 1999-2013



Source: Statistics Canada.

Among doctoral degrees awarded (Figure 2.18), the second oldest group (aged30 to 34 years) is the age group with the largest number of degrees awarded to international students since 2004. Note that, as indicated elsewhere, there were no doctoral degrees awarded to anyone 25 and under. Numbers of degrees awarded to international students in the other three age groups have all been increasing, especially in the most recent five years, 2009 to 2013.

This same information is presented in a somewhat different format in Table 2.12, which gives the percent of the degrees awarded in each age group which were awarded to international students.

The percentage of Master's degrees awarded to international students has increased in all age groups since 1999. However, if we focus on trends in the most recent years, 2009 to 2013, we see it is the two youngest age groups in which the percentage of degrees awarded to international students has increased the most. For the youngest age group, those under 25 years of age, 27% of the Master's degrees awarded in 2013 went to international students. This number compares to 17% in 2009. For those who were 25 to 29 years of age, the percentage of Master's degrees awarded to international students went from 17% in 2009 to 25% in 2013. There has been little change, from 2009 to 2013, in the percentage of Master's degrees awarded to those in the two highest age groups.

Table 2.12 – Master's and doctoral degrees awarded, percent to international students by age group, 1999-2013

% international	Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Master's	Less than 25	10.9	13.8	16.9	15.9	18.6	21.1	21.0	22.9	25.2	19.6	17.1	19.5	22.0	23.4	27.1
	25 to 29	10.5	11.3	12.4	14.3	14.7	16.5	16.6	16.8	16.7	16.3	17.0	18.5	20.9	22.7	24.6
	30 to 34	10.9	10.5	13.4	13.3	13.7	15.4	14.1	15.5	15.0	15.1	14.1	13.3	14.4	16.7	17.7
	35 and over	5.5	5.5	10.0	10.6	10.2	12.3	10.8	13.1	14.3	14.0	12.3	11.0	10.4	10.6	12.5
Doctoral	Less than 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	25 to 29	10.4	10.3	11.7	12.9	13.6	13.7	14.8	14.3	15.7	17.4	15.1	16.6	17.1	19.7	24.2
	30 to 34	14.5	12.6	14.7	15.0	14.6	14.9	16.8	16.9	16.1	13.8	14.3	14.3	16.0	17.3	20.4
	35 and over	16.8	13.4	14.5	14.5	13.4	13.2	13.5	12.8	11.8	11.4	12.2	11.1	12.3	12.5	13.3

Source: Statistics Canada * Note: There were no doctoral degrees awarded to anyone 25 and under

For doctoral degrees granted, the change in the percent international in the five years from 2009 to 2013 is more concentrated than for Master's degrees awarded. While the percent international went from 15% in 2009 to 24% in 2013 for those 25 to 29 years of age, there was virtually no increase in the percent international in this time period for the oldest age group. Doctoral degrees granted to those 30 to 35 years of age went from 14% international in 2009 to 20% international in 2013.

2.12 World region of Degrees awarded to International students

Finally, Table 2.13 shows the percentage distribution of world regions for international students receiving graduate degrees in Canada from 2007-2013. (Information on world region is only available for this limited time period.) Note that the percentages in any year do not add to 100% because sub-areas (for example the sub-areas in Asia) are included as well as the total for the whole area (e.g. Asia).

Table 2.13 –World region of degrees awarded to international students, percentage distribution, 2007-2013

	Master's							Doctoral						
	2007	2008	2009	2010	2011	2012	2013	2007	2008	2009	2010	2011	2012	2013
United States	7.3	8.8	7.8	8.0	7.3	6.9	6.1	11.3	10.8	11.5	13.5	12.9	12.6	10.4
..Central America	2.1	2.9	2.2	2.3	1.9	1.6	1.6	6.3	4.3	3.7	4.5	3.9	3.8	3.0
..Caribbean and Bermuda	2.3	2.5	2.8	2.3	1.9	2.2	1.5	0.5	0.4	0.4	0.4	0.6	0.6	0.7
..South America	4.1	4.7	3.2	3.2	3.3	2.4	3.4	5.9	5.6	7.0	5.6	5.5	4.1	3.9
Europe	16.2	15.6	13.9	13.6	13.6	13.7	12.2	26.6	28.0	25.8	24.4	23.3	25.2	21.5
..Western Europe	11.5	10.7	9.6	9.7	9.6	9.7	9.0	16.2	16.8	16.4	16.9	14.9	17.7	14.1
..Eastern Europe	1.9	2.4	2.3	1.6	1.8	1.9	1.4	2.7	4.3	3.7	3.4	2.9	2.1	2.5
..Northern Europe	1.6	1.6	1.4	1.3	1.3	1.0	1.0	3.6	3.9	2.9	2.3	3.9	2.4	2.3
United Kingdom	0.8	1.0	0.8	0.8	0.9	0.6	0.6	2.3	2.2	1.2	1.5	2.3	1.2	1.4
..Southern Europe	1.2	1.0	0.6	1.0	0.9	1.1	0.8	3.2	3.0	2.9	2.3	1.9	3.2	2.1
Africa	8.7	8.6	9.9	9.6	9.1	9.3	8.6	6.3	8.2	7.4	9.4	8.4	7.3	8.3
Asia	57.4	53.9	55.6	57.3	60.3	57.9	65.5	39.2	40.5	39.8	35.3	37.9	40.5	47.0
..West Central Asia and the Middle East	9.6	7.9	8.8	9.8	12.1	12.7	12.8	12.2	11.6	13.5	10.9	12.3	14.1	16.7
..Eastern Asia	37.3	35.5	34.4	33.3	30.0	26.3	33.8	16.2	18.1	15.6	14.3	16.5	15.8	18.8
..Southeast Asia	1.5	1.9	1.9	1.9	2.2	1.5	1.5	4.5	3.4	4.1	3.8	2.9	3.5	3.5
..Southern Asia	9.1	8.5	10.5	12.2	16.0	17.5	17.4	6.3	6.9	6.6	6.8	6.1	7.0	8.1
Oceanic	0.4	0.4	0.4	0.4	0.4	0.3	0.3	1.4	0.9	1.2	0.8	1.9	0.9	1.5

Source: Statistics Canada Note: percentages do not add to 100% because sub-regions are included.

It is clear that Asia dominates the degrees awarded to international students in all years shown, especially among doctoral degrees awarded. Students from Asia were awarded more than half of all Master's degrees awarded to international students in Canada, from 2007 to 2013, the years for which we have data. The largest sub-group within these graduates is the one from Eastern Asia.

Also of note is that international students from Europe account for 12% or more of the Master's degrees awarded in those years, although the percentage has decreased somewhat in recent years. In 2007, 16% of the Master's degrees awarded to international students were awarded to students from Europe. This had decreased slightly to 12% in 2013.

Europe is more prominent in the percentage of degrees awarded to international *doctoral* students, 2007 to 2013, although again there is a decline. In 2007, 27% of the degrees awarded to international students went to those from Europe; this had declined to 22% in 2013.

There was a corresponding rise in the percentage of doctoral degrees awarded to international students which went to students from Asia. In 2007, 39% of all these degrees were awarded to students from Asia. By 2013 this percentage had increased to 47%.

(Note: no data are available on the permanent province of Canadian citizens and permanent residents to whom graduate degrees have been awarded.)

2.13 Enrolments and degrees by university

Detailed information on enrolments and degrees awarded by university is presented in Part 2 of this Report.