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Earnings of Highly and of Less Educated Couples in the Labour Market, 1980–2000

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Earnings of Highly and of Less Educated Couples in the Canadian Labour Market, 1980–2000

René Morissette and Anick Johnson
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Summary

Between 1980 and 2000, the real median earnings of young male high school graduates employed in the private sector, fell by roughly 20%.¹ In sharp contrast, the earnings of female university graduates rose by at least 20% over the same period. In this context, how have the earnings of couples who are highly educated and those less educated fared over this period?

Between 1980 and 2000, the average earnings² of couples, whose level of education was that of a high school diploma or less, have generally decreased or stagnated. In contrast the average earnings of couples, who both have university degrees, have increased by at least 14%. As a result, the gap in earnings between those couples with lower levels of education and their counterparts who are more highly educated, has widened.

Among all couples, women have seen their earnings rise. However, for those living with men with little education, this increase has sometimes not been enough to offset the reduction in earnings experienced by their male partner. For instance, young couples, with levels of education of a high school diploma or less, have seen their employment incomes go down compared to those of their counterparts in 1980. The reason is that the fall in earnings of less educated husbands has been only partially offset by the increase in earnings of their partners.

Couples who have a high school diploma or less education made up about 29% of all couples (where the husband is 25 to 54 years of age) in 2000, compared to 40% in 1980. In contrast, couples with university degrees saw their relative importance increase from 4% in 1980 to 10% in 2000.

Compared to their less educated counterparts, highly educated couples benefit in three ways. Firstly, they often earn more than \$100,000 and are therefore in a position to save for a rainy day. Secondly, they are less likely to lose their jobs. Lastly, if they do lose their job, they can often benefit from the second significant earner who can cushion the blow of the reduced partner's income.

Using data from the 1981, 1986, 1991, 1996 and 2001 censuses, this study examines the evolution of employment incomes of less educated couples and highly educated couples. This study is an abbreviated version of a research paper titled "Earnings of Couples with High and Low Levels of Education, 1980-2000" published in the *Analytical Studies Branch Research Paper Series*, Statistics Canada Catalogue no. 11F0019MIE2004230. Please consult the original document for more information and the bibliographical references.

1. See R. Morissette, Y. Ostrovsky and G. Picot, 2004, "The Performance of Low and High Educated Couples in the knowledge economy", *Analytical Studies Branch Research Paper Series*, Catalogue no. 11F0019MIE2004232, Ottawa, Statistics Canada.

2. For simplification purposes, the term "earnings" will be used to mean "employment earnings in constant 2001 dollars".

Note to readers

We used data from the 1980 and 2000 censuses, which are the only data available that combine information on level of education and earnings consistently for the entire period.

To identify the long-term changes in couples' earnings, we compared their employment earnings and income in 1980 and in 2000, expressed in constant 2001 dollars. These two years are fairly comparable in terms of labour market conditions.

We are concentrating the analysis on opposite-sex couples who are married or living in a common-law relationship, both partners being Canadians by birth. Results on the labour market performance of immigrant couples are available in the research paper on which this version is based entitled "Earnings of Couples with High and Low Levels of Education, 1980-2000", 2004, *Analytical Studies Branch Research Paper Series*, Catalogue no. 11F0019MIE2004230, Ottawa, Statistics Canada.

The term "husbands" ("wives") include married men (women) as well as those living in a common-law relationship.

The educational attainment of individuals is defined using four categories: 1) no high school diploma, 2) high school diploma, 3) post-secondary education below bachelor's level (henceforth, post-secondary education) and, 4) university degree (bachelor's level or higher). For this analysis, we grouped 16 possible combinations into the following 10 education levels of partners:

1. Neither the husband nor the wife has a high school diploma.
2. The husband has a high school diploma; the wife has no high school diploma.
3. The wife has a high school diploma; the husband has no high school diploma.
4. Both husband and wife have a high school diploma.
5. The husband has post-secondary education; the wife has a high school diploma or less.
6. The wife has post-secondary education; the husband has a high school diploma or less.
7. Both husband and wife have post-secondary education.
8. The husband has a university degree; the wife has post-secondary education or less.
9. The wife has a university degree; the husband has post-secondary education or less.
10. Both husband and wife have a university degree.

Earnings of less-educated husbands decline significantly

Between 1980 and 2000, the annual earnings of husbands with lower levels of education declined significantly. In couples with high school education or less and where the man was aged between 25 and 34, husbands saw their annual earnings fall between 15% and 26% (Table 1). For older husbands, where the couple had similar educational levels, the drop in annual earnings varied between 9% and 28%.

These declines in annual earnings were not simply due to a decline in the number of hours worked annually, rather, they were in large part due to a decline in the weekly pay rates of less educated men. For instance, the weekly earnings of full-time working husbands aged between 25 and 34 and who were part of a low-educated couple fell by anything from 13% to 21% between 1980 and 2000.

In this context, it is appropriate to examine whether the growing labour force participation of their partner offset the decline in their earnings.

Table 1. Average annual earnings of husbands, by age of husband and education level of partners, Canada, 1980 and 2000¹

	Education level of partners									
	1	2	3	4	5	6	7	8	9	10
Husbands aged 25–34										
1980	32,300	38,500	35,900	39,600	41,100	37,500	41,700	54,000	40,100	53,000
2000	23,900	27,900	27,200	33,600	36,600	35,500	38,500	52,100	41,700	55,600
Change (%)	-26	-28	-24	-15	-11	-5	-8	-4	4	5
Incidence in 2000 (%) ²	1.7	0.7	1.1	2.4	3.0	3.5	5.1	1.6	2.8	3.0
Husbands aged 35–44										
1980	37,000	48,100	41,300	47,900	48,300	45,800	50,000	78,700	51,100	80,500
2000	31,900	35,100	34,100	43,500	45,800	40,300	48,100	76,900	51,400	88,200
Change (%)	-14	-27	-17	-9	-5	-12	-4	-2	0	10
Incidence in 2000 (%) ²	3.6	1.2	2.2	4.2	5.7	5.2	8.0	2.9	3.2	3.7
Husbands aged 45–54										
1980	36,700	50,500	41,800	53,800	47,700	45,400	51,800	93,000	59,500	98,100
2000	32,000	38,100	34,400	46,000	48,000	40,800	48,500	81,200	51,900	94,000
Change (%)	-13	-25	-18	-15	1	-10	-6	-13	-13	-4
Incidence in 2000 (%) ²	4.3	1.2	1.9	4.1	5.5	4.0	5.8	3.2	2.2	3.3

1. See "Note to readers" for a definition of couple, husband, wife and education level of partners.

2. Percentage of couples in this category in 2000.

Source: 1981 and 2001 censuses.

Growth in wives' earnings not always enough

Regardless of age or level of education, Canadian-born wives had higher annual earnings in 2000 than their counterparts did in 1980 (Table 2). However, their growing earnings did not always offset the declining earnings experienced by their lower educated partners.

In 2000, for instance, young couples with high school education or less had annual earnings between 6% and 20% lower than their counterparts in 1980, despite the fact that the wives' annual earnings grew between \$1,100 and \$2,900 (Tables 2 and 3).

In contrast, the growth in wives' earnings often prevented a drop in the earnings of older less educated couples. For example, in 2000 the annual earnings of older couples with no high school diploma were almost identical to those of their counterparts in 1980, despite the fact that the husbands' annual earnings fell by about 13% (Table 3).

Table 2. Average annual earnings of wives, by age of husband and education level of partners, Canada, 1980 and 2000¹

	Education level of partners									
	1	2	3	4	5	6	7	8	9	10
Husbands aged 25–34										
1980	7,300	8,700	12,200	13,000	10,400	15,800	15,700	16,300	27,700	26,200
2000	9,700	9,800	13,700	15,900	14,100	19,200	20,700	22,800	30,500	34,600
Change (\$)	2,400	1,100	1,500	2,900	3,700	3,400	5,000	6,500	2,800	8,400
Husbands aged 35–44										
1980	8,200	9,300	12,400	12,200	9,700	15,500	15,300	12,600	33,300	26,500
2000	13,000	13,500	18,700	20,800	17,500	23,600	23,600	25,100	39,800	42,200
Change (\$)	4,800	4,200	6,300	8,600	7,800	8,100	8,300	12,500	6,500	15,700
Husbands aged 45–54										
1980	8,000	8,800	12,600	12,100	9,600	16,700	15,600	12,700	36,100	24,400
2000	13,400	14,100	19,300	21,900	18,600	25,400	25,800	26,600	43,100	47,400
Change (\$)	5,400	5,300	6,700	9,800	9,000	8,700	10,200	13,900	7,000	23,000

1. See "Note to readers" for a definition of couple, husband, wife and education level of partners.

Source: 1981 and 2001 censuses.

Table 3. Percentage change in husbands' earnings and couples' average annual earnings, by age of husband and education level of partners, Canada, 1980–2000¹

	Education level of partners									
	1	2	3	4	5	6	7	8	9	10
	%									
Husbands aged 25–34										
Husbands' earnings	-26	-28	-24	-15	-11	-5	-8	-4	4	5
Couples' earnings	-15	-20	-15	-6	-1	3	3	7	6	14
Husbands aged 35–44										
Husbands' earnings	-14	-27	-17	-9	-5	-12	-4	-2	0	10
Couples' earnings	0	-15	-2	7	9	4	10	12	8	22
Husbands aged 45–54										
Husbands' earnings	-13	-25	-18	-15	1	-10	-6	-13	-13	-4
Couples' earnings	2	-12	-1	3	16	7	10	2	-1	15

1. See "Note to readers" for a definition of couple, husband, wife and education level of partners. Shaded areas indicate cases where the difference between average earnings in 2000 and those in 1980 is statistically significant at the 5% level.

Source: 1981 and 2001 censuses.

Rising gap between less and more educated couples

Generally speaking, women's earnings rose more among higher-educated couples than lower-educated couples.

For example, among couples where both are university graduates, the wives' annual earnings rose between \$8,400 and \$23,000 from 1980 to 2000 (Table 2). However, the wives' annual earnings rose at most by \$5,400 among couples with no high school diploma.

Consequently, the earnings gap between lower- and higher-educated couples grew over the last two decades. Couples where both are university graduates saw their average earnings grow by at least 14%, while couples with no high school diploma saw their earnings stagnate or fall by up to 15% (Table 3).

Low-earnings couples lost ground

The earnings gap not only grew between lower and higher educated couples, but it also grew among couples of similar ages and levels of education.

For example, young couples with at most one high school graduate saw their earnings fall on average from 15% to 20% between 1980 and 2000. However, within this group, low earning couples (those at the bottom third of the earnings distribution) saw their employment income fall by at least 41% over the same period (Table 4). In contrast, high earning couples (those in the top third of the earning distribution) suffered a more modest drop in their employment income of, at most, 8%.

These trends however, are not limited to young couples. For example, couples with no high school diploma and where the husband was aged between 45 and 54 saw very little change in their average earnings between 1980 and 2000. However, within this group, low earning couples suffered a 33% drop in employment income, while high earning couples saw their employment income rise by 9%.

Table 4. Percentage change in husbands' earnings and couples' earnings, by age of husband, education level of partners and position in the earning distribution, Canada, 1980–2000¹

	Education level of partners									
	1	2	3	4	5	6	7	8	9	10
	%									
Husbands aged 25–34										
Husbands' earnings										
Average	-26	-28	-24	-15	-11	-5	-8	-4	4	5
Bottom third ²	-66	-58	-49	-32	-28	-16	-19	-18	5	-11
Top third ²	-16	-14	-13	-6	-1	7	1	8	8	19
Couples' earnings										
Average	-15	-20	-15	-6	-1	3	3	7	6	14
Bottom third ²	-58	-51	-41	-23	-18	-6	-6	-7	15	6
Top third ²	-4	-8	-6	1	5	10	8	14	7	21
Husbands aged 35–44										
Husbands' earnings										
Average	-14	-27	-17	-9	-5	-12	-4	-2	0	10
Bottom third ²	-52	-55	-36	-25	-14	-17	-12	-24	-14	-17
Top third ²	-2	-17	-12	1	-1	-9	3	10	6	31
Couples' earnings										
Average	0	-15	-2	7	9	4	10	12	8	22
Bottom third ²	-42	-46	-18	-7	0	2	5	-7	2	6
Top third ²	11	-5	2	13	11	5	13	20	13	34
Husbands aged 45–54										
Husbands' earnings										
Average	-13	-25	-18	-15	1	-10	-6	-13	-13	-4
Bottom third ²	-47	-44	-27	-28	-15	-25	-17	-31	-23	-22
Top third ²	-4	-21	-13	-9	7	-5	-1	-2	-13	7
Couples' earnings										
Average	2	-12	-1	3	16	7	10	2	-1	15
Bottom third ²	-33	-31	-7	-9	5	-1	2	-15	-2	4
Top third ²	9	-9	0	7	21	9	13	10	-1	23

1. See "Note to readers" for a definition of couple, husband, wife and education level of partners. Shaded areas indicate cases where the difference between average earnings in 2000 and those in 1980 is statistically significant at the 5% level.

2. Average earnings growth of husbands' earnings and couples' earnings for couples located in the bottom third (or top third) of the distribution of couples' earnings of a given age and educational background.

Source: 1981 and 2001 censuses.

Other means helped to offset declines in earnings

Although some couples suffered a decline in their employment income, they managed to avoid a decline in their standard of living. There are several reasons for this. Some families were eligible for government transfer payments or received other forms of income (employment income from other family members, investment income). Others had relatively few children compared to their counterparts in the early 1980s.

For instance, young couples where both partners were high school graduates saw their annual earnings fall by 6% between 1980 and 2000. However, there was only a slight change in their total income whether adjusted or not to account for changes in family size.

Other couples saw their total adjusted income drop much less than their employment income. This is the case for those couples where the husband is aged 35 to 44 and has a high school diploma but their partner does not have one. These couples saw their employment income drop on average by 15% between 1980 and 2000. However, the drop in their total income was smaller, amounting to 10% (Table 5). Lastly, when taking into account the fact that these couples had smaller families than their counterparts in 1980, we observe that the total adjusted income of these couples fell by 5%, which is three times less than the decline in their employment income.

Table 5. Percentage change in average earnings and income, by age of husband and education level of partners, 1980–2000¹

	Education level of partners									
	1	2	3	4	5	6	7	8	9	10
	%									
Husbands aged 25–34										
Husbands' earnings	-26	-28	-24	-15	-11	-5	-8	-4	4	5
Couples' earnings	-15	-20	-15	-6	-1	3	3	7	6	14
Total income	-2	-9	-7	1	4	6	6	7	6	13
Total adjusted income	-4	-12	-10	-1	5	6	8	10	6	15
Husbands aged 35–44										
Husbands' earnings	-14	-27	-17	-9	-5	-12	-4	-2	0	10
Couples' earnings	0	-15	-2	7	9	4	10	12	8	22
Total income	2	-10	1	10	8	3	8	9	5	20
Total adjusted income	10	-5	5	12	12	8	12	13	5	21
Husbands aged 45–54										
Husbands' earnings	-13	-25	-18	-15	1	-10	-6	-13	-13	-4
Couples' earnings	2	-12	-1	3	16	7	10	2	-1	15
Total income	-5	-16	-8	-4	6	-2	2	-4	-8	7
Total adjusted income	6	-8	1	3	13	5	9	5	-6	13

1. See "Note to readers" for a definition of couple, husband, wife and education level of partners. Shaded areas indicate cases where the difference between average earnings in 2000 and those in 1980 is statistically significant at the 5% level.

Source: 1981 and 2001 censuses.

University educated couples less vulnerable

Although there has been a decline in earnings for several less educated couples over the last two decades, there has also been an emergence of couples where both are university graduates.

In 1980, only 4% of Canadian-born couples were made up of two university graduates. Today, 20 years later, this proportion has doubled to 10% (Table 6).

Highly educated couples enjoy a triple advantage—in terms of economic security—when compared to their less educated counterparts.

First, they are more likely to receive high labour market incomes, thereby allowing them the possibility to build substantial savings for precautionary motives (e.g. to buffer the income loss resulting from layoffs).

Second, they are less likely to be laid off.

Third, in the event of a layoff, they can rely more often on a significant second earner to moderate the variability in family earnings.

For these three reasons, couples with two university graduates are less vulnerable to negative income shocks than other couples.

Table 6. Percentage distribution of couples with husbands aged 25 to 54, by education level of partners, Canada, 1980 to 2000¹

	Education level of partners										All
	1	2	3	4	5	6	7	8	9	10	
	%										
1980	24.4	4.3	5.4	5.7	19.1	11.8	14.2	8.2	2.5	4.3	100
1985	20.5	4.2	5.6	5.6	18.0	12.7	16.2	8.1	3.6	5.5	100
1990	15.7	2.7	4.9	7.8	15.9	12.7	20.5	8.2	4.7	7.0	100
1995	12.3	3.7	5.0	10.5	12.6	13.8	19.4	7.9	6.4	8.5	100
2000	9.6	3.0	5.2	10.7	14.1	12.7	18.9	7.6	8.2	9.9	100

1. See "Note to readers" for a definition of couple, husband, wife and education level of partners.

Source: 1981, 1986, 1991, 1996 and 2001 censuses.