

## Color by Numbers: Minority Earnings in Canada 1995–2005

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**Abstract** We investigate the pattern of earnings disparity across Canadian-born ethnic groups in Canada over three census years, 1996, 2001, and 2006. This extends “Colour My World” by 10 years (Pendakur and Pendakur 2002). We find that the earnings gaps faced by Canadian-born visible minorities have not eroded since the 1990s. This is somewhat surprising given that the size of this population has radically increased over the last 20 years. Other patterns observed in the 1990s, such as the relatively poor earnings outcomes of South Asians and Blacks, particularly in Montreal and Toronto, are still evident into the 2000s. An exception to the ‘bad news’ outlook is that persons of Caribbean origin have seen substantial convergence in their earnings relative to majority workers.

**Keywords** Earnings differentials · Minority groups · Canada

### Introduction

According to the 2006 census, over half of Canada’s population reported minority origins (ethnic origins other than British, French, or Canadian). Of these, about 16% are members of a visible minority (a person of non-European and non-Aboriginal descent) about a third of whom are born in Canada. These minorities are educated and socialized in Canada, and speak either one or both official languages accentlessly. Under any reasonable scenario, they should not therefore be subject to an earnings penalty based on any of the traditional reasons why an immigrant may face a penalty. In this paper, we investigate the patterns of earnings disparity across ethnic groups within the Canadian-born population. In the context of rapidly growing ‘home-grown’ minority populations, one might expect that ethnically based

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gaps in labor market performance would diminish over time. We find, to our chagrin, that earnings gaps between white and visible minority workers, which first widened in the 1990s, remain very large.

A large body of Canadian research shows that visible minority immigrants can face substantial labor market disparity, which may be worsening over time (see for example, Akbari, 1992; Howland and Sakellariou, 1993; Stelcner and Kyriazis, 1995; Christofides and Swidinsky, 1994; Baker and Benjamin 1995; Hum and Simpson, 1998; Pendakur and Pendakur, 1998; Lian and Mathews 1998). A smaller literature has established that Canadian-born visible minorities also face labor market penalties (see Stelcner and Kyriazis 1995; Pendakur and Pendakur 2002). These papers have shown that both male and female visible minorities face disparity, and that certain visible minority ethnic groups drive this disparity, especially South-Asian and Black/Caribbean/African origins (see de Silva and Dougherty 1996; Baker and Benjamin 1995; Hum and Simpson 1998; Pendakur and Pendakur 2002). Further Skuterud (2010) finds that earnings gaps can remain even after three generations. Similarly, Palameta (2007) finds that gaps do not disappear for Canadian born minorities. Conversely, Reitz et al. (2009) find that some Canadian-born visible minority ethnic groups, particularly Chinese origin men, perform better than majority workers.

There are strong patterns across Canadian cities: in particular, Pendakur and Pendakur (1998) focus attention on the high degree of disparity observed in Montreal relative to Toronto and Vancouver, which cannot be explained away by compositional differences. Pendakur and Pendakur (2002) find that these patterns have existed since at least the 1980s. Kazempur and Halli (2001) find similar patterns in minority poverty across cities.

More recent work has added some nuance to our understanding of visible minority disparity. For example, Fang and Heywood (2006) find that visible minorities in Canada do better if they are in “piece-work” or “output-based” pay settings. Hou and Coulomb (2010) show that patterns of disparity differ between the public and private sector: if one controls for job characteristics such as occupation, the wage differential faced by visible minorities in the public sector is essentially zero. This is consistent with the finding of Oreopoulous (2009) that name discrimination is a much larger problem in small as compared to large firms/organizations. Taken together, these findings suggest that in settings where compensation is less rule-bound, visible minorities do worse conditional on their job assignment. Of course, the issue of what jobs visible minorities get remains relevant.

Most Canadian-born visible minorities are the children of immigrants. Skuterud (2010) compares immigrant labor market outcomes to the grandchildren of immigrants, and find evidence of inter-generational convergence. That is, the children outperform their immigrant parents, and the grandchildren outperform the children. Thus, one might expect that in a few more generations, all disparity will disappear. There are three important cautions to bear in mind. First, Skuterud (2010) does not find much convergence for Black people. Second, Ginsberg and Henry (1989) and Oreopoulous (2009) conduct audit studies which find that skin color and name discrimination, respectively, are relevant factors even when all aspects of a person’s resume are identical. Third, in the present paper, we find, depressingly, that

even as the proportion of Canadian-born visible minority workers has more than doubled over the past 15 years, earnings disparity is largely unchanged.

## Methodology

Our goal is to evaluate the scope of labor market disadvantage with three micro datasets which contain all the ‘long form’ records collected by Statistics Canada for the 1996, 2001, and 2006 Censuses of Canada. These datasets are very large and allow consistent definitions of variables over the period 1996–2006. It is thus possible to assess the degree to which Canadian-born minorities face earnings differentials, as well as the degree to which those differentials have changed over time. We concentrate on the Canadian-born population because while immigrants may face earnings differentials related to such things as language or accent penalties, non-recognition of credentials or loss of work related networks, these issues do not face ethnic minorities born in Canada. Specifically, we estimate earnings differentials between white and visible minority/Aboriginal workers for Canada as a whole and in three large Canadian cities across three census years. In addition, we investigate earnings differentials between British-origin workers and 42 ethnic groups (both white and nonwhite) in Canada as a whole and in Montreal, Toronto, and Vancouver separately. When considering the 42-group categorization, we do *not* report on Aboriginal origins, because those are discussed in much greater detail in Pendakur and Pendakur ([forthcoming](#)).

Our sample is restricted to workers earning more than \$100 per year, whose major source of income is wages and salaries, who are aged between 25 and 64 and who are Canadian citizens by birth. All regressions are done separately for men and for women.

We estimate log-earnings equations in two ways. The first controls only for personal characteristics (age, education, marital status, official language knowledge, and census metropolitan area of residence). The second controls for both personal characteristics and work characteristics (occupation, industry sector, weeks of work, and full-time/part-time status). In all regressions, the dependent variable is the natural logarithm of annual earnings from wages to salaries.<sup>1</sup>

There are two ways to interpret these two types of regressions. First, one could consider that one of them measures ‘true’ earnings discrimination across ethnic groups. In this case, one must decide whether or not discrimination occurs on the earnings (or wage) margin given work characteristics, or whether work characteristics themselves are subject to discrimination. If good work characteristics, such as high-paying occupations or lots of hours or weeks of work, are not freely available, then work characteristics are potentially subject to discrimination—controlling for

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<sup>1</sup> Coefficients from log-earnings can be interpreted as approximately equal to percentage disparities between the group of interest and the specified reference (i.e., “left-out”) category, holding constant all the personal characteristics in the regression. In our regressions, the left-out category is “white” when considering visible minorities as a whole, and is “British” when considering the collection of 42 ethnic groupings. Thus, if a reported coefficient on visible minority is  $-0.05$ , then one could say that visible minorities earn 5% less than whites with similar personal characteristics.

work characteristics would be the wrong thing to do. Indeed, in this case, estimates which control for work characteristics would understate the true level of discrimination. In contrast, if individuals freely choose their occupation, industry, hours and weeks of work, then controlling for work characteristics would be the right thing to do. Indeed, in this case, estimates which do not control for work characteristics would reveal a mix of the effects of labor market discrimination and the effects of differences in preferences over work characteristics across ethnic groups.

We believe that the work characteristics of workers—such as occupation and industry—are at least as susceptible to ethnic discrimination as the wages paid to workers. The case is made by Becker (1996), and others that in competitive labor markets, ethnic discrimination by employers, workers or customers, results not in wage differentials for workers in identical jobs but in segregation of workers into different jobs by ethnicity. With competitive product and labor markets, this segregation results in a ‘separate-but-equal’ type of world where ethnic discrimination results in dividing the economy into sub-economies composed of single ethnic groups with identical wage and earnings outcomes across sub-economies.

But, if either of these competitive assumptions is relaxed, the ‘separate-but-equal’ conclusions do not follow. For example, if product markets are not competitive so that some firms make excess profits which are partially shared with (possibly unionized) workers, then workers in those firms make more money than seemingly identical workers in other firms with less excess profits. Pendakur and Woodcock (2009) find evidence that immigrants end up in low-wage firms. Here, segregation results in unequal outcomes.

Alternatively, if labor markets are not competitive, a similar “separate-but-unequal” conclusion can follow. For example, consider the occupation of investment banker, which pays a lot in part because investment bankers must have something to lose if their investors are to trust them. If white workers have a better chance of getting these jobs than nonwhite workers, then occupation segregation results in earnings differentials between white and nonwhite workers.

Given that we have a strong prior belief that our regressions should not control for work characteristics, why report regressions that do control for them? We have two reasons for reporting both types of regression estimates. First, Pendakur and Pendakur (1998) provide evidence from the 1991 Census public use sample that controlling for job characteristics (occupation, industry, weeks worked and full time/part time status) shrinks but does not eliminate earnings differentials across ethnic groups in Canada. Providing both types of regression results allows us to consider the measurement of discrimination in both a world where work characteristics are not freely available (a world which we believe we inhabit), and a world where work characteristics are freely available (a world which other social scientists believe we inhabit).

Second, Pendakur and Woodcock (2009) show that the *difference* in the estimated earnings disparity between a regression that controls for work characteristics and a regression that does not control for them is a meaningful statistic. In particular, it measures the degree to which the money value of work characteristics is correlated with ethnic origin. Further, the hypothesis that the money value of work characteristics is uncorrelated with ethnic origin (conditional on personal characteristics) is directly testable.

Our analysis is divided into two parts. The first part focuses on the visible minority, Aboriginal versus white earnings differential at the Canada wide level as well as for the census metropolitan areas (CMAs) of Montreal, Toronto, and Vancouver controlling for personal characteristics in each of the three census periods.<sup>2</sup> The second part breaks the three groups into 42 ethnic subgroups. There are ten visible minority categories, 24 European (white) groups, and eight aboriginal categories. Here, we concentrate on the white and visible minority groups, and direct readers interested in Aboriginal incomes to Pendakur and Pendakur ([forthcoming](#)). The earnings differentials across men and women in these groups are examined for Canada as a whole and for Montreal, Toronto, and Vancouver separately.

We use a variety of independent variables to control for the personal characteristics of workers in our samples:

*Age* Eight age cohorts as dummy variables (age 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, and 60–64). Age 25–29 is the left-out dummy variable.

*Schooling* We control for 12 levels of certificates as dummy variables (none, high school, trades certificate, college certificate less than 1 year, college certificate less than 3 years, college certificate 3 or more years, university certificate less than Bachelors, Bachelors degree, BA+, medical degree, Masters degree, and PhD). No certificate is the left-out dummy variable.

*Marital Status* Five dummy variables indicating marital status (single–never married, married, separated, divorced, widowed). Single is the left-out dummy variable.

*Household Size* Household size is a dummy variable indicating a single person household and a continuous variable indicating the number of family members for other households.

*Official Language* There are three dummy variables (English, French, bilingual—English and French). English is the left-out dummy variable. We note that because our sample is entirely Canadian-born, every observation reports speaking either English or French. This also eliminates the much variation in quality of language knowledge that plagues the estimation of earnings differentials across ethnic groups.

*CMA* In regressions which pool all the cities together, we use 12 dummy variables indicating the Census Metropolitan Area/Region (Halifax, Montreal, Ottawa, Toronto, Hamilton, Winnipeg, Calgary, Edmonton, Vancouver, Victoria, in another CMA or not in a CMA). Toronto is the left-out dummy variable.

*Group Status* The three dummy variables indicating group status (White, visible minority, Aboriginal person). White is the left-out dummy variable. Alternatively, 42

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<sup>2</sup> A census metropolitan area is a very large urban area (known as the urban core) together with adjacent urban and rural areas (known as urban and rural fringes) that have a high degree of social and economic integration with the urban core. A CMA has an urban core population of at least 100,000, based on the previous census (Statistics Canada, 1996).

dummy variables indicating ethnic origin (with separate dummies for various multiple-origin groups), with British-only as the left-out ethnic origin. For these, we do not report on the eight Aboriginal origin groups.<sup>3</sup>

The data and selection criteria are identical to those in Pendakur and Pendakur (2002), except for the exclusion of persons reporting less than \$100 of earnings in the year. This is a very minor difference, as these observations are less than 0.1% of the sample. The controls are identical to those in Pendakur and Pendakur (2002) except for the education variable. This is because the 1971 through 1996 census data used in Pendakur and Pendakur (2002) contained very detailed information on highest grade of schooling for those without postsecondary education, and much less detail on highest level of schooling for those with postsecondary education. In the 2006 data, this pattern is reversed: there is no information at all on highest grade of schooling for persons without postsecondary education. Thus, it is impossible to construct a reasonable education variable (with detail where the frequencies are high) from the available data that is comparable throughout 1971–2006. It turns out that this difference in education coding results in economic significant differences in estimated disparities in 1996 between the current paper and Pendakur and Pendakur (2002), which we will discuss below. However, the basic thrust of all our results all stand up to “downcoding” the education variable to be comparable throughout the period.

## Results

### Descriptives

Table 1 shows weighted counts and log of earnings information by sex and ethnic origin. As per Statistics Canada guidelines, we are unable to release exact counts, but we note that weighted counts are approximately five times the actual numbers of observations. The key feature of Table 1 is that it shows the very large size of the data sets at our disposal. Looking at the log of wages, it is also apparent that while results for European minorities are both positive and negative (i.e., there are examples of European groups earnings more and less than British origin men), the average earnings for visible minorities are generally earn lower. Our goal is to see if these differentials exist after controlling for personal characteristics such as age, education and marital status.

### *White/Visible Minority/Aboriginal Disparity*

Table 2 shows results from 48 regressions (regressions controlling for personal, and personal and work characteristics for each of the three census periods by four

<sup>3</sup> For ease of comparison, we use British as the comparison group of choice. However, it could be argued that using British as the comparison group in Montreal is problematic because they are not the largest group. We note that after controlling for personal characteristics, there is little difference in the earnings across the majority groups (British, French, or Canadian). Thus, we interpret our results as being the difference between any given group and the Canadian-born majority population.

**Table 1** Descriptives: frequencies and log of earnings for selected groups, Canada, 1996–2006

Ethnic group	Females						Males					
	1995		2000		2005		1995		2000		2005	
	Count	Log of wages	Count	Log of wages	Count	Log of wages	Count	Log of wages	Count	Log of wages	Count	Log of wages
British	402,605	9.69	377,485	9.97	385,880	10.14	506,445	10.24	460,370	10.48	459,265	10.63
French	240,735	9.59	199,390	9.96	242,110	10.13	249,685	10.07	234,310	10.39	273,020	10.53
Canadian	614,515	9.56	1,125,400	9.85	1,046,795	10.04	683,255	10.12	1,243,655	10.33	1,102,735	10.50
Br/Fr/Can multiple	819,020	9.75	1,188,650	9.98	1,262,540	10.17	794,410	10.31	1,154,010	10.47	1,185,845	10.63
Amer Aust NZ	1,090	9.60	1,570	9.97	2,080	10.10	1,375	10.24	2,125	10.44	2,905	10.56
Austrian+ German	85,475	9.67	89,650	9.94	90,775	10.15	100,000	10.29	104,980	10.52	104,265	10.71
Scandinavian	20,520	9.69	20,240	9.94	20,685	10.17	24,670	10.28	24,475	10.51	23,425	10.67
Belgian	3,195	9.70	3,950	10.06	4,550	10.24	3,415	10.29	4,345	10.44	5,140	10.63
Dutch	33,170	9.69	38,470	9.95	41,670	10.15	38,390	10.33	42,775	10.59	44,550	10.79
Baltic	2,760	10.06	3,490	10.33	3,500	10.45	3,070	10.52	3,405	10.75	3,435	10.89
Polish	16,020	9.84	18,535	10.13	19,330	10.30	17,485	10.36	19,800	10.57	20,465	10.75
Russian	4,720	9.75	5,675	9.92	6,590	10.13	4,620	10.30	5,880	10.52	7,535	10.65
Czech/Slovak	3,705	9.84	4,125	10.05	4,030	10.27	4,235	10.43	4,555	10.54	4,285	10.68
Jewish	12,095	10.01	17,810	10.26	11,790	10.35	10,265	10.49	16,525	10.79	10,520	10.88
Hungarian	8,070	9.77	8,870	10.03	8,905	10.21	8,980	10.29	9,765	10.51	10,010	10.71
Ukrainian	53,665	9.79	51,565	10.02	48,980	10.23	57,335	10.31	57,360	10.50	51,380	10.74
Portuguese	5,110	9.79	11,775	10.01	18,210	10.19	5,715	10.10	13,000	10.37	19,255	10.53
Italian	50,380	9.89	92,195	10.14	102,435	10.34	57,520	10.29	95,685	10.53	104,385	10.75

**Table 1** (continued)

Ethnic group	Females						Males					
	1995		2000		2005		1995		2000		2005	
	Count	Log of wages	Count	Log of wages	Count	Log of wages	Count	Log of wages	Count	Log of wages	Count	Log of wages
Greek	6,550	9.81	14,440	10.06	17,075	10.25	6,845	9.96	14,530	10.24	17,280	10.50
Spanish	550	9.78	1,440	9.90	2,230	10.17	825	9.98	1,910	10.29	2,775	10.44
Balkan	7,490	9.92	10,735	10.20	15,305	10.34	7,850	10.29	11,605	10.52	16,060	10.73
Oth European	6,425	9.76	6,020	10.04	3,985	10.12	8,175	10.28	6,820	10.50	5,305	10.59
White multiple	515,425	9.75	613,765	9.99	790,705	10.17	515,970	10.33	591,025	10.53	751,260	10.69
Spanish Latin	210	9.25	950	9.73	2,460	10.03	205	9.76	1,225	10.07	2,430	10.29
Arab w Asia	1,965	9.74	5,375	10.00	8,465	10.15	2,205	10.11	5,885	10.38	8,555	10.46
Black	895	9.51	1,880	9.78	1,345	9.92	1,140	9.83	1,765	10.09	1,400	10.07
Caribbean	3,860	9.61	10,060	9.88	16,545	10.11	4,170	9.83	10,060	10.12	15,305	10.25
African Black	765	9.61	1,590	9.82	2,880	9.95	990	9.85	1,590	10.07	3,160	10.20
SE Asia	6,660	10.05	3,125	9.90	1,525	10.01	7,390	10.36	3,175	10.21	1,585	10.13
S. Asian	3,250	9.86	9,155	10.01	18,945	10.21	3,915	10.09	9,625	10.21	19,165	10.38
Chinese	11,760	10.06	17,560	10.27	25,490	10.42	12,980	10.26	19,090	10.47	27,505	10.62
Other Asia	55	9.86	6,960	10.29	13,235	10.33	120	9.88	7,170	10.58	13,420	10.51
Vismim w white	13,085	9.70	24,380	10.00	39,615	10.13	13,515	10.16	23,330	10.32	38,465	10.48

Source: 1996, 2001, and 2006 census mainbase  
 Selection all Canadian-born residents of Canada, 25–64 years of age, whose primary source of income is from wages to salaries. People without any schooling were dropped from the sample as were those earning less than \$100 per year



**Table 2** Percent difference in earnings between selected groups of Canadian-born visible minority and aboriginal men and women compared to British origin men and women, 1995–2005

Sex	Region	Variable	1995						2000						2005								
			Personal		Work		Personal-work		Personal		Work		Personal-work		Personal		Work		Personal-work				
			coef.	s.e.	coef.	s.e.	coef.	sig.	coef.	s.e.	coef.	s.e.	coef.	sig.	coef.	s.e.	coef.	s.e.	coef.	sig.			
Female	Canada	Observations	806,880		806,880		840,887		840,887		923,350		923,350		923,350		923,350		923,350		923,350		
		R2	0.14	0.56	0.14	0.51	0.14	0.51	0.16	0.55	0.16	0.55	0.16	0.55	0.16	0.55	0.16	0.55	0.16	0.55	0.16	0.55	
		Visible minority	-0.04	0.01	-0.03	0.01	-0.01	0.01	-0.07	0.01	-0.06	0.01	-0.01	0.01	-0.03	0.01	-0.04	0.00	0.00	0.01	0.01	0.01	0.01
		Aboriginal	-0.13	0.01	-0.10	0.00	-0.04	***c	-0.22	0.00	-0.12	0.00	-0.10	***	-0.07	0.00	-0.08	0.00	0.00	0.02	0.02	0.02	0.02
		Observations	93,640	93,640	93,640	93,640	97,780	97,780	97,780	97,780	106,209	106,209	106,209	106,209	106,209	106,209	106,209	106,209	106,209	106,209	106,209	106,209	
		R2	0.12	0.50	0.13	0.46	0.13	0.46	0.16	0.53	0.16	0.53	0.16	0.53	0.16	0.53	0.16	0.53	0.16	0.53	0.16	0.53	
	Toronto	Visible minority	-0.15	0.04	-0.10	0.03	-0.05	**	-0.17	0.03	-0.11	0.02	-0.06	***	-0.11	0.02	-0.08	0.01	-0.03	0.01	-0.03	0.01	
		Aboriginal	-0.26	0.06	-0.16	0.04	-0.11	***	-0.28	0.05	-0.19	0.04	-0.08	***	-0.20	0.03	-0.12	0.02	-0.08	0.02	-0.08	0.02	
		Observations	79,130	79,130	84,383	84,383	84,383	84,383	84,383	88,583	88,583	88,583	88,583	88,583	88,583	88,583	88,583	88,583	88,583	88,583	88,583		
		R2	0.10	0.54	0.09	0.48	0.09	0.48	0.12	0.53	0.12	0.53	0.12	0.53	0.12	0.53	0.12	0.53	0.12	0.53	0.12	0.53	
		Visible minority	-0.10	0.02	-0.06	0.01	-0.04	***	-0.09	0.01	-0.05	0.01	-0.04	***	-0.03	0.01	-0.04	0.01	-0.04	0.01	-0.04	0.01	
		Aboriginal	-0.16	0.04	-0.05	0.03	-0.11	***	-0.22	0.03	-0.12	0.02	-0.10	***	-0.16	0.03	-0.13	0.02	-0.04	0.02	-0.04	0.02	
Vancouver	Observations	42,505	42,505	43,692	43,692	43,692	43,692	46,477	46,477	46,477	46,477	46,477	46,477	46,477	46,477	46,477	46,477	46,477	46,477	46,477			
	R2	0.09	0.54	0.07	0.50	0.07	0.50	0.10	0.49	0.10	0.49	0.10	0.49	0.10	0.49	0.10	0.49	0.10	0.49	0.10	0.49		
	Visible minority	0.13	0.02	0.03	0.02	0.10	***	0.05	0.02	-0.01	0.01	0.06	***	0.14	0.02	0.05	0.01	0.09	0.01	0.09	0.01		
	Aboriginal	-0.31	0.03	-0.15	0.02	-0.16	***	-0.35	0.03	-0.21	0.02	-0.14	***	-0.14	0.02	-0.11	0.02	-0.04	0.02	-0.04	0.02		
	Observations	884,835	884,835	891,695	891,695	891,695	891,695	941,613	941,613	941,613	941,613	941,613	941,613	941,613	941,613	941,613	941,613	941,613	941,613	941,613			
	R2	0.18	0.49	0.18	0.44	0.18	0.44	0.18	0.48	0.18	0.48	0.18	0.48	0.18	0.48	0.18	0.48	0.18	0.48	0.18	0.48		
Male	Canada	Visible minority	-0.14	0.01	-0.08	0.01	-0.06	***	-0.17	0.01	-0.10	0.01	-0.07	***	-0.18	0.01	-0.11	0.00	-0.08	0.01	-0.08	0.01	
		Aboriginal	-0.59	0.00	-0.25	0.00	-0.34	***	-0.52	0.00	-0.23	0.00	-0.29	***	-0.42	0.00	-0.22	0.00	-0.20	0.00	-0.20	0.00	
		Observations	97,430	97,430	97,430	97,430	98,418	98,418	103,038	103,038	103,038	103,038	103,038	103,038	103,038	103,038	103,038	103,038	103,038	103,038	103,038		
		R2	0.17	0.44	0.16	0.39	0.16	0.39	0.16	0.48	0.16	0.48	0.16	0.48	0.16	0.48	0.16	0.48	0.16	0.48	0.16	0.48	
		Visible minority	-0.21	0.03	-0.12	0.03	-0.09	***	-0.28	0.03	-0.13	0.02	-0.14	***	-0.31	0.02	-0.18	0.01	-0.13	0.01	-0.13	0.01	
		Observations	97,430	97,430	97,430	97,430	98,418	98,418	103,038	103,038	103,038	103,038	103,038	103,038	103,038	103,038	103,038	103,038	103,038	103,038	103,038		

**Table 2** (continued)

Sex	Region	Variable	1995			2000			2005											
			Personal	Work	Personal-work	Personal	Work	Personal-work	Personal	Work	Personal-work									
			coef.	s.e.	coef.	s.e.	coef.	s.e.	coef.	s.e.	coef.	s.e.	coef.	s.e.	coef.	s.e.	sig			
		Aboriginal	-0.23	0.05	-0.13	0.04	-0.10	***	-0.31	0.05	-0.24	0.04	-0.07	***	-0.15	0.03	-0.09	-0.06	***	
		Observations	79,140		79,140			83,999		83,999				86,640		86,640				
		R2	0.19		0.50			0.19		0.43				0.21		0.47				
		Visible minority	-0.18	0.02	-0.06	0.01	-0.11	***	-0.17	0.01	-0.11	0.01	-0.06	***	-0.14	0.01	-0.10	0.01	-0.04	***
		Aboriginal	-0.49	0.04	-0.21	0.03	-0.28	***	-0.16	0.03	-0.09	0.03	-0.08	***	-0.12	0.03	-0.04	0.02	-0.08	***
		Observations	45,185		45,185			45,096		45,096				47,132		47,132				
		R2	0.17		0.50			0.16		0.46				0.16		0.45				
		Visible minority	-0.04	0.02	-0.05	0.01	0.00	***	-0.08	0.02	-0.08	0.01	0.00	***	-0.06	0.01	-0.06	0.01	0.00	***
		Aboriginal	-0.48	0.03	-0.21	0.02	-0.27	***	-0.45	0.02	-0.22	0.02	-0.23	***	-0.28	0.02	-0.14	0.02	-0.14	***

Source: 1996, 2001, and 2006 census mainbases

Note: age cohorts, schooling, marital status, household size, official language ability, group status. Canada level regressions include 13 dummies for region (10 CMAs, a small CMA identifier and non-CMA identifier) work model controls include all personal controls as well as occupation, industry, full-time/part time status and weeks worked

Selection: all Canadian-born residents of Canada, 25–64 years of age, whose primary source of income is from wages to salaries. People without any schooling were dropped from the sample as were those earning less than \$100 per year

Significance: \* $p=0.10$ , \*\* $p=0.05$ , \*\*\* $p=0.01$

regions—Canada, Montreal, Toronto, and Vancouver by sex) that measure the earnings differential faced by Canadian-born visible minority and Aboriginal men and women as compared to white men and women.

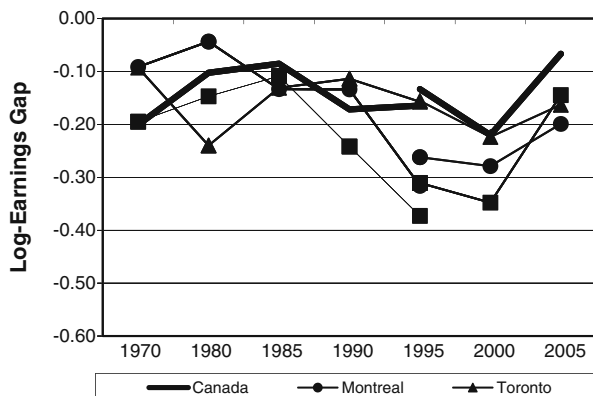
Table 2 reports coefficients from each type of regression, as well as the difference in the estimated coefficient between the regressions that include or exclude work characteristics. Pendakur and Woodcock (2009) describe how to interpret this difference: it is equal to a regression coefficient from an artificial regression with the money value of work characteristics on the left-hand side and personal characteristics on the right hand side. The money value of work characteristics is equal to the predicted value of log-earnings for a person whose personal characteristics are equal to zero. Thus, if a person is in a high-pay occupation and industry, and works 50 weeks full time, she will have a high money value of characteristics.

Thus, the differences reported in Table 2 reveal whether or not different ethnic groups secure valuable work characteristics given their personal characteristics. For example, if disparity given personal characteristics is equal to  $-0.15$ , and the difference between this and the disparity given work characteristics is equal to  $-0.05$ , then the sorting of workers in this ethnic group across the various occupations and industries contributes 5 percentage points to the overall disparity of 15 percentage points that they face. These differences do not have well-defined analytical standard errors except in special situations, so we do not report their standard errors. However, a test statistic can be constructed to test the hypothesis that the difference is zero, and we report stars in the Table indicating the statistical significance of this hypothesis test.

Figures 1, 2, 3, and 4 summarize results from regressions using only personal characteristics and integrates them with similar results for 1971–1996 from Pendakur and Pendakur (2002). We note that the overtime comparison is best interpreted as two general comparisons, the first running from 1971 to 1996 and the second from 1996 to 2006. For this reason, we provide two estimates for 1996—the first using coefficients from Pendakur and Pendakur (2002), with full schooling information, and the second using schooling information which matches the 2006 census.

Figures 1 and 2 provide log-earnings differentials for Aboriginal men and women from 1970 to 2005 for Canada as a whole and Montreal, Toronto, and Vancouver. For both men and women we see substantial earnings gaps, on the order of  $-0.10$  to

**Fig. 1** Aboriginal women, 1970–2005



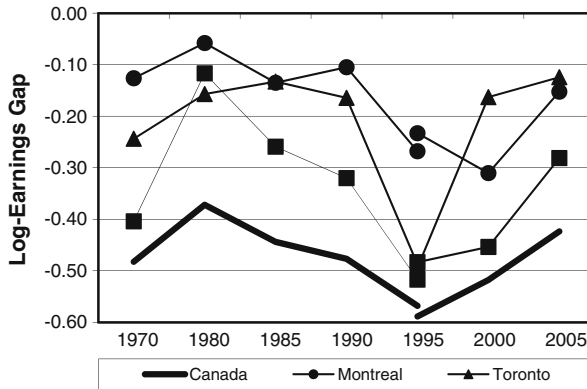


Fig. 2 Aboriginal men, 1970–2005

−0.40 for women and −0.05 to −0.60 for men. However, it also apparent that there has been a general improvement in the earnings differentials faced since 1996 in all cities. This is particularly the case for Aboriginal men who show a decrease in the gap of about 15–20 percentage points. Figures 3 and 4 show results for visible minority women and men. Here, although the gaps are not as large, there has been little improvement over the past decade for men, but some improvement for women. Visible minority women living in Vancouver, for example have consistently earned more than similarly aged and schooled white women. However in the other two cities, women face earnings differential of between −0.03 and −0.10 in 2006. For men, the earnings differentials are universally negative, but smaller in Vancouver than in the other cities. Montreal in particular shows worsening differentials over most of the period, with visible minority men now facing an earnings differential of about −0.30.

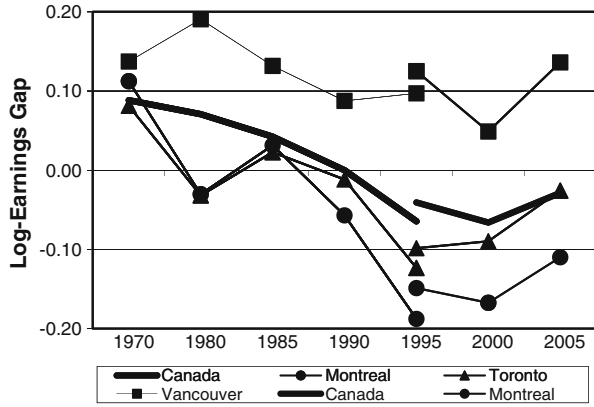
Results from Table 2 provide the information in Figs. 1, 2, 3, and 4 as well as two additional types of information. First along with regressions controlling for only personal characteristics, Table 2 also provides results for regressions controlling for both personal and work characteristics. Second, the last two columns in each year provide information on the difference between the personal and work characteristics as well as the significance level of *t* test statistic, which determines whether the coefficients (personal vs. personal and work) are significantly different from each other.<sup>4</sup>

Looking first at women (top panel of Table 2) in 1995 (top right hand block), we see that Canadian-born visible minorities face a relatively small gap of 4 percentage points when only personal characteristics are included. This drops to 3 percentage points when both personal and work characteristics are included. However the *t* statistics suggests that there is no significant difference between the two coefficients.

<sup>4</sup> The *t* statistic is calculated using the following Hausman test formula (see Pendakur and Pendakur forthcoming):

$$t = \frac{\text{coef}_{\text{personal}} - \text{coef}_{\text{work}}}{\sqrt{(\text{se}^2_{\text{personal}} + \text{se}^2_{\text{work}})}}$$

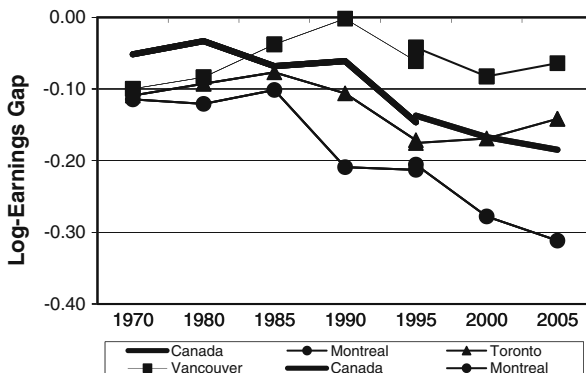
**Fig. 3** Visible minority women, 1970–2005



Looking at women in Montreal, we see that when only personal characteristics are included, visible minorities face an earnings differential of  $-15\%$  whereas Aboriginal women face an earnings differential of  $-26\%$ . Adding work characteristics to the model reduces the gap to  $-10\%$  for visible minority women and  $-16\%$  for Aboriginal women, a difference that is statistically significant for both groups.

Adding work characteristics reduces the earnings differential in all cities and in all years with the exception of visible minority women in Toronto, where the difference between the two coefficients is small and not significantly different. The case of Vancouver is of particular interest because visible minority women experience a substantial earnings bonus based on personal characteristics. This shrinks to close to zero however when work characteristics are added to the model. This suggests that although visible minority women do enjoy better work characteristics, given those work characteristics their earnings are at parity. This is not the case for men in Vancouver, whose earnings do not change significantly when work characteristics are added to the model.

Looking at the results for men (bottom panel of Table 2), we see that for Aboriginal men in particular, the earnings differentials are huge, often in excess of  $-0.20$ . However, work characteristics often explain about half the earnings differential faced by Aboriginal men. For example, Aboriginal men living in Vancouver in 2006 face an earnings differential of  $-0.28$  when only personal



**Fig. 4** Visible minority men, 1970–2005

characteristics are included. This shrinks to  $-0.14$  when both personal and work characteristics are included. This suggests that a substantial portion of the earnings disparity faced by Aboriginal men is a product of their sorting into less favorable work characteristics. As was detailed in the “[Methodology](#)” section, this could be a result of choice, but it could also be a result of segregation—a situation in which Aboriginal men are *unable* to obtain similar types of work as compared to white men.

For visible minority men, the earnings differentials are much smaller, but not negligible. With the exception of Vancouver, adding work characteristics to the model reduces the earnings differential by at least half. For example, at the Canada-wide level, visible minority men face an earnings differential of  $-0.18$  when only personal characteristics are included, but  $-0.11$  when both personal and work characteristics are included. Visible minority men fare particularly poorly in Montreal. In 2006, Canadian-born visible minority men living in Montreal face an earnings differential of  $-0.31$  compared to similarly aged and educated white men living in Montreal. This differential shrinks to 18% when work characteristics are included, which suggests that a substantial portion of the differential is a product of visible minorities not obtaining the same type of work. With the exception of Vancouver, the reduction in the earnings differential when work characteristics are added to the model is statistically significant.

### Disparity Among Ethnic Groups

Table 3 shows results from six regressions (one for each year—sex combination) measuring earnings disparity for 22 selected European groups and 10 visible minority groups compared to men and women of single origin British ancestry.<sup>5</sup> Looking first at women, we see few statistically significant differences among European groups. The exceptions are Jewish and Greek women who face earnings differentials of  $-8\%$  and  $-4\%$  respectively and Portuguese and Belgian women who earn about 10% more than British origin women with similar characteristics.

Results for visible minority women are mixed, but more likely to be negative. Looking at visible minority women in 1996 we see that African, Caribbean, Black, and Latin American women faced substantial penalties ranging from  $-0.14$  to  $-0.30$ . In 2006 while Caribbean women saw substantial improvement ( $-0.17$  in 1996 to  $-0.08$  in 2006), and Latin American women did not face a significant earnings differential, Black and African Black women saw no improvement. Further, Arab and West Asian women who did not face a penalty in 1996 faced a small penalty in 2006. Chinese women, on the other hand, can expect to earn more than similarly qualified British origin; however, that bonus shrinks from 10% in 1995 to 6% in 2005.<sup>6</sup>

The situation for men is different. Differentials (in both directions tend to be larger than those seen for women). Amongst European origin men, German, Dutch, Ukrainian and Polish men earned more than similarly qualified British origin men

<sup>5</sup> Appendix Table 5 provides analogous results that include work characteristics.

<sup>6</sup> Results from Appendix Table 5 suggest that this bonus is wiped out when job characteristics are added to the model.

Table 3 Difference in earnings between Minority men and women compared to British origin men and women, controlling for personal characteristics, Canada, 1995–2005

	Female						Male					
	2000		2005		1995		2000		2005		1995	
	coef.	s.e.	coef.	s.e.	coef.	s.e.	coef.	s.e.	coef.	s.e.	coef.	s.e.
Observations	806,880		923,350		884,835		891,695		941,613		891,695	
R2	0.14		0.16		0.19		0.18		0.19		0.18	
French	0.02	0.01	-0.01	0.01	0.01	***	0.02	0.00	0.01	***	-0.01	0.01
Canadian	0.00	0.00	-0.02	0.00	0.00	***	0.01	0.00	0.00	***	-0.02	0.00
Br/Fr/Can. Multiple	-0.01	0.00	-0.03	0.00	0.00	***	0.03	0.00	0.00	***	0.00	0.00
American/Aust/NZ	-0.03	0.06	0.02	0.05	-0.03	0.04	0.00	0.05	-0.04	0.04	0.03	0.03
Baltic	0.02	0.04	-0.03	0.04	-0.01	0.03	0.04	0.03	0.03	0.03	0.03	0.03
Austrian/German	0.01	0.01	0.01	0.01	0.01	0.01	0.08	0.01	0.05	0.01	0.06	0.01
Czech/Slovak	0.03	0.03	0.01	0.03	0.03	0.03	0.10	0.03	0.01	0.03	-0.01	0.03
Scandinavian	0.00	0.01	0.02	0.02	0.02	0.01	0.03	0.01	0.06	0.01	0.04	0.01
Dutch	0.01	0.01	-0.01	0.01	-0.02	0.01	0.10	0.01	0.08	0.01	0.08	0.01
Polish	0.06	0.02	0.04	0.02	0.04	0.01	0.08	0.01	0.02	0.01	0.04	0.01
Jewish	-0.08	0.02	-0.10	0.02	-0.12	0.02	0.02	0.02	0.05	0.02	0.01	0.02
Hungarian	0.05	0.02	0.01	0.02	-0.01	0.02	0.03	0.02	0.01	0.02	0.02	0.02
Russian	0.04	0.03	-0.05	0.03	-0.04	0.03	0.03	0.03	0.08	0.02	0.02	0.02
Portuguese	0.09	0.03	0.06	0.02	0.09	0.02	0.01	0.02	0.00	0.02	0.02	0.01
Italian	0.07	0.01	0.02	0.01	0.04	0.01	0.03	0.01	-0.04	0.01	0.00	0.01
Greek	-0.04	0.02	-0.08	0.02	-0.07	0.02	-0.17	0.02	-0.22	0.02	-0.18	0.01
Balkan	0.04	0.02	0.08	0.02	0.05	0.02	0.06	0.02	0.01	0.02	0.01	0.02
Spanish	0.08	0.07	-0.13	0.06	-0.05	0.04	-0.10	0.05	-0.08	0.05	-0.10	0.04

Table 3 (continued)

	Female						Male					
	1995		2000		2005		1995		2000		2005	
	coef.	s.e.	coef.	s.e.	coef.	s.e.	coef.	s.e.	coef.	s.e.	coef.	s.e.
Ukrainian	0.06	0.01	0.04	0.01	0.05	0.01	0.05	0.01	0.02	0.01	0.07	0.01
Belgian	0.10	0.03	0.09	0.03	0.09	0.03	0.04	0.03	0.01	0.03	0.04	0.03
White multiple	0.01	0.00	-0.01	0.00	0.00	0.00	0.06	0.00	0.03	0.00	0.04	0.00
Arab w Asian	0.03	0.04	-0.07	0.03	-0.05	0.02	-0.02	0.03	-0.06	0.03	-0.13	0.02
S. Asian	-0.02	0.04	-0.11	0.02	0.00	0.02	-0.16	0.03	-0.24	0.02	-0.19	0.01
Chinese	0.10	0.02	0.04	0.02	0.06	0.01	0.02	0.02	-0.07	0.01	-0.08	0.01
SE. Asian	0.06	0.03	-0.11	0.04	-0.04	0.05	0.03	0.02	-0.13	0.03	-0.30	0.05
Other Asian	-0.19	0.25	0.06	0.03	0.06	0.02	-0.19	0.17	0.02	0.02	-0.08	0.02
African Black	-0.14	0.07	-0.27	0.05	-0.21	0.04	-0.28	0.06	-0.27	0.05	-0.32	0.03
Black	-0.16	0.07	-0.17	0.05	-0.19	0.05	-0.26	0.05	-0.30	0.05	-0.40	0.05
Caribbean	-0.17	0.03	-0.19	0.02	-0.08	0.02	-0.35	0.03	-0.23	0.02	-0.24	0.02
Spanish Latin	-0.30	0.13	-0.25	0.07	-0.05	0.04	-0.53	0.11	-0.26	0.06	-0.15	0.04
Vismin w white	-0.08	0.02	-0.07	0.01	-0.07	0.01	-0.07	0.02	-0.12	0.01	-0.10	0.01

Variables in model include: age cohorts, schooling, marital status, household size, official language ability, group status, and 13 dummies for region (10 CMAs, a small CMA identifier, and non-CMA identifier)

Source 1996, 2001, and 2006 census mainbase

Selection All Canadian-born residents of Canada, 25–64 years of age, whose primary source of income is from wages to salaries. People without any schooling were dropped from the sample as were those earning less than \$100 per year

Significance: \*  $p=0.1$ , \*\*  $p=0.05$ , \*\*\*  $p=0.01$



across the three census periods (with coefficients ranging from 0.04 to 0.10). It should be noted however that the differential tended to be smaller in 2005 than in 1995. Greek and Spanish men faced fairly substantial earning penalties across the 10-year period ( $-0.18$  and  $-0.10$  respectively in 2005). For all other European groups, the earnings differential was statistically insignificant.

With few exceptions, there has been a real deterioration in the prospects for visible minority men over the three census periods. In 1995, Arab, Chinese, and SE Asian men earned about the same amount as British origin men after controlling for personal characteristics. Other groups faced penalties ranging from  $-0.16$  to  $-0.53$ . In 2005, all visible minority groups faced substantial and statistically significant earnings penalties ranging from  $-0.10$  to  $-0.40$ . Indeed Chinese men, who 10 years earlier had earnings at parity now face an earnings penalty of about 8%. Arab and West Asian men face a 13% penalty and South East Asian men a 30% penalty. At the same time, there was improvement for Caribbean men, with the differential dropping from  $-0.35$  to  $-0.24$ . Adding job characteristics (see Appendix Table 5) generally reduces the differentials by about half in most cases, leaving gaps ranging from  $-0.07$  to  $-0.24$ .

### Differences Across Cities

Table 4 shows results from 18 regressions for 15 selected ethnic origin groups (one for each census period by sex for Montreal, Toronto, and Vancouver).<sup>7</sup> The goal of this table is twofold. First, it provides an answer as to whether the strong penalty faced by visible minorities in Montreal is because of a composition effect—the dominant groups in Montreal are Caribbean and black—the same groups that face the largest penalties as compared to Vancouver where the dominant groups are Chinese and South Asian both of whom face smaller penalties, or whether, the penalty is simply larger. Second, it assesses the degree to which different groups may face different penalties in different cities—i.e., the degree to which different cities acts as different labor markets.

Results from Table 4 suggest that composition effects are not responsible for the large penalties faced by minorities in Montreal. The worst off African origin group (i.e., African Black, Caribbean, or Black ethnic group) in Toronto enjoys a lower penalty than the best off African origin group in Montreal. Penalties are smaller still in Vancouver. Similarly, South Asians, and Chinese are best off in Vancouver and worst off in Montreal.

Looking first at the results for women we see that in Montreal, results are mixed. South Asian and Chinese women earn about the same as British origin women. For Caribbean women, the differential decreased from  $-0.25$  to  $-0.09$ . However, for other African origin groups earnings differentials increased. In the other two cities, earnings differentials either remained roughly stable or declined over the 10-year period.

Amongst men, results are also mixed in Montreal. Greek men face a strong and growing penalty ( $-0.22$  in 1995 and  $-0.35$  in 2005). The fortunes of Portuguese men also fell over time. Where they earned almost the same as British origin men in

<sup>7</sup> Results from Appendix Table 6 provide analogous results including work characteristics.

**Table 4** Difference in earnings between selected minority groups compared to British origin by sex, controlling for personal characteristics, Canada, 1995–2005

Variable	Montreal						Toronto						Vancouver											
	1995		2000		2005		1995		2000		2005		1995		2000		2005							
	coef.	s.e.	coef.	s.e.	coef.	s.e.	coef.	s.e.	coef.	s.e.	coef.	s.e.	coef.	s.e.	coef.	s.e.	coef.	s.e.						
Female Observations	93,640		97,780		106,209		79,130		84,383		88,583		42,505		43,692		46,477							
R2	0.12		0.13		0.16		0.11		0.09		0.12		0.09		0.07		0.10							
French	0.01	0.02	0.02	0.02	0.03	0.02	0.02	0.02	-0.06	0.03	**	0.04	0.03	-0.04	0.04	-0.01	0.04	0.02	0.04					
Dutch	-0.02	0.12	0.17	0.11	-0.01	0.11	0.00	0.03	-0.05	0.03	0.01	0.03	0.01	0.03	-0.04	0.04	-0.13	0.04	***	-0.09	0.04			
Jewish	-0.06	0.04	*	-0.11	0.04	***	-0.06	0.02	***	-0.05	0.02	**	-0.10	0.03	***	0.00	0.07	-0.02	0.07	-0.02	0.09			
Portuguese	-0.04	0.08	0.02	0.06	0.08	0.04	0.04	0.04	0.03	0.03	0.08	0.03	***	0.10	0.10	0.02	0.08	0.17	0.07	**				
Italian	-0.02	0.03	0.03	0.02	0.05	0.02	0.05	0.01	***	-0.03	0.01	**	0.04	0.01	***	0.11	0.04	0.02	0.04	***	-0.01	0.04		
Greek	-0.17	0.04	***	-0.12	0.04	***	0.03	0.03	-0.09	0.03	***	-0.03	0.03	0.01	0.09	0.07	0.09	0.07	0.09	0.07	0.09	-0.05	0.08	
Arab	0.01	0.07	0.02	0.06	-0.01	0.04	0.08	0.09	-0.10	0.06	-0.13	0.05	**	0.40	0.22	*	-0.15	0.17	-0.10	0.12				
w Asian																								
S. Asian	-0.28	0.16	*	-0.25	0.12	**	-0.14	0.06	**	-0.16	0.04	***	-0.01	0.03	***	0.12	0.06	*	-0.01	0.04	0.17	0.03	***	
Chinese	0.09	0.09	0.05	0.08	0.00	0.06	0.01	0.04	-0.01	0.03	0.06	0.02	***	0.15	0.03	***	0.12	0.03	***	0.18	0.03	***		
SE. Asian	-0.14	0.14	-0.40	0.16	**	-0.19	0.08	**	-0.04	0.04	-0.09	0.06	0.02	0.12	0.16	0.05	***	0.06	0.09	-0.01	0.17			
African	-0.07	0.24	0.07	0.15	-0.16	0.09	*	-0.48	0.13	***	-0.30	0.08	***	-0.25	0.06	***	0.36	0.30	-0.22	0.18	0.19	0.21		
Black																								
Black	-0.16	0.21	0.09	0.15	-0.26	0.13	**	-0.27	0.11	**	-0.23	0.08	***	-0.12	0.10	0.38	-0.56	0.38	-0.06	0.26	-0.68	0.45		
Caribbean	-0.25	0.08	***	-0.25	0.05	***	-0.15	0.04	***	-0.21	0.03	***	-0.06	0.02	***	-0.12	0.14	-0.34	0.15	**	-0.16	0.13		
Spanish	-0.08	0.33	-0.21	0.16	0.02	0.09	-0.35	0.24	-0.29	0.10	***	-0.06	0.07	-0.49	0.30	*	-0.34	0.32	0.04	0.18				
Latin																								
Vismin	-0.20	0.05	***	-0.09	0.04	**	-0.18	0.04	***	-0.15	0.03	***	-0.06	0.02	***	-0.11	0.05	**	-0.06	0.04	-0.06	0.03	*	
w white																								
Male Observations	97,430		98,418		130,038		79,140		83,999		86,640		45,185		45,096		47,132							
R2	0.17		0.16		0.17		0.19		0.19		0.21		0.17		0.17		0.16							
French	0.05	0.02	***	0.00	0.02	0.00	0.02	0.02	0.03	0.02	0.02	0.03	-0.03	0.03	0.02	0.03	0.02	0.03	0.02	0.03	0.02	0.04		
Dutch	0.21	0.11	*	-0.05	0.11	-0.09	0.09	0.06	0.03	*	0.08	0.03	***	0.05	0.03	*	0.06	0.03	*	0.00	0.03	0.06	0.03	*

Jewish	0.06	0.03	*	0.05	0.04	-0.07	0.04	*	-0.02	0.02	0.03	0.02	0.03	0.01	0.03	-0.07	0.06	0.05	0.06	0.13	0.08
Portuguese	-0.02	0.07	**	-0.10	0.05	-0.08	0.04	**	-0.04	0.04	0.04	-0.04	0.03	0.04	0.02	0.00	0.09	0.10	0.07	0.09	0.06
Italian	-0.05	0.02	**	-0.14	0.02	-0.12	0.02	***	0.00	0.01	-0.08	0.01	***	-0.01	0.01	0.07	0.03	**	-0.02	0.03	0.11
Greek	-0.22	0.04	***	-0.35	0.04	-0.35	0.03	***	-0.15	0.03	***	-0.20	0.03	***	-0.13	0.02	***	-0.17	0.08	**	-0.18
Arab	0.05	0.07		-0.02	0.05	-0.12	0.04	***	-0.10	0.09	-0.05	0.06		-0.08	0.05	-0.18	0.14	-0.32	0.13	**	-0.05
w Asian																					
S. Asian	-0.06	0.18	***	-0.33	0.10	-0.40	0.06	***	-0.27	0.05	***	-0.21	0.03	***	-0.14	0.02	***	-0.09	0.05	*	-0.20
Chinese	-0.11	0.07		-0.10	0.07	-0.21	0.05	***	-0.05	0.03	***	-0.12	0.03	***	-0.11	0.02	***	0.03	0.03	0.03	-0.02
SE. Asian	0.24	0.15		-0.07	0.13	-0.43	0.09	***	0.00	0.04	-0.14	0.05	***	-0.33	0.11	***	-0.01	0.04	-0.07	0.08	0.14
African	-0.74	0.24	***	-0.20	0.14	-0.43	0.09	***	-0.48	0.12	***	-0.24	0.08	***	-0.43	0.06	***	0.02	0.17	-0.63	0.22
Black																					
Black	-0.56	0.18	***	-0.47	0.16	-0.98	0.13	***	-0.15	0.11	-0.14	0.08	*	-0.21	0.09	**	-0.38	0.19	**	-0.19	0.21
Caribbean	-0.26	0.08	***	-0.40	0.05	-0.31	0.03	***	-0.45	0.04	***	-0.23	0.03	***	-0.20	0.02	***	-0.18	0.12	0.11	0.11
Spanish	-0.73	0.23	***	-0.36	0.12	-0.31	0.08	***	-0.62	0.17	***	-0.34	0.10	***	-0.09	0.07	**	-0.94	0.42	**	-0.14
Latin																					
Vismin	-0.21	0.05	***	-0.09	0.04	-0.16	0.03	***	-0.11	0.03	***	-0.19	0.03	***	-0.13	0.02	***	-0.13	0.04	***	-0.15
w white																					

Variables in model include: age cohorts, schooling, marital status, household size, official language ability, and group status

Source 1996, 2001, and 2006 census mainbase

Selection All Canadian-born residents of Canada, 25–64 years of age, whose primary source of income is from wages to salaries. People without any schooling were dropped from the sample as were those earning less than \$100 per year

Significance \* $p=0.1$ , \*\* $p=0.05$ , \*\*\* $p=0.01$

1995, they faced an 8% differential in 2005. Arab and West Asian, South Asian, Chinese, and SE Asian men (groups that did not face an earnings penalty in 1995) now face differentials of between  $-0.21$  and  $-0.43$ . Black and Caribbean men also experienced a fall in outcomes.

The situation in Toronto is also mixed. Amongst women, there is almost universal improvement, with differentials declining over time. Amongst men, there was a decline in the differential faced by Greek, South Asian, and Caribbean men, but an increase in the differential faced by other African origin men as well as Chinese men. In Vancouver, with few exceptions minority groups enjoyed an improvement in their labor force situation or earned about the same as British origin Canadians.

## Conclusions

Previous research has shown that visible minorities and Aboriginals earn less than white workers, especially among men. Our goal in this paper was to show how these differentials have evolved since the mid-1990s using a consistent data set and econometric methodology. We find that the earnings gaps faced by Canadian-born visible minorities have not eroded since the 1990s. This is somewhat surprising given that the size of this population has radically increased over the last 20 years. Other patterns observed in the 1990s, such as the relatively poor earnings outcomes of South Asians and Blacks, and the relatively poor visible minority outcomes in Montreal and Toronto, are still evident into the 2000s. An exception to the 'bad news' outlook is that persons of both Caribbean and Aboriginal origins have seen substantial convergence in their earnings relative to majority workers.

## Appendix

**Table 5** Difference in earnings between Minority men and women compared to British origin men and women, controlling for personal and work characteristics, Canada, 1995–2005

	Female						Male						
	1995		2000		2005		1995		2000		2005		
	coef.	s.e.	coef.	s.e.	coef.	s.e.	coef.	s.e.	coef.	s.e.	coef.	s.e.	
Observations	806,880		840,887		923,350		884,835		891,695		941,613		
R2	0.56		0.51		0.56		0.49		0.44		0.48		
French	0.02	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	-0.01	0.00
Canadian	0.00	0.00	-0.02	0.00	-0.01	0.00	-0.01	0.00	-0.02	0.00	0.00	0.00	0.00
Br/Fr/Can. Multiple	0.00	0.00	-0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
American/ Aust/NZ	0.05	0.04	0.02	0.04	-0.02	0.03	0.07	0.04	-0.02	0.03	0.00	0.03	0.00
Baltic	0.02	0.03	0.01	0.03	0.01	0.03	0.04	0.03	0.01	0.03	0.00	0.03	0.00

**Table 5** (continued)

	Female						Male					
	1995		2000		2005		1995		2000		2005	
	coef.	s.e.	coef.	s.e.	coef.	s.e.	coef.	s.e.	coef.	s.e.	coef.	s.e.
Austrian/ German	0.00	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Czech/ Slovak	0.04	0.02	0.01	0.03	0.02	0.02	0.06	0.02	0.01	0.02	-0.02	0.02
Scandinavian	0.01	0.01	0.03	0.01	0.03	0.01	0.03	0.01	0.03	0.01	0.01	0.01
Dutch	0.01	0.01	0.02	0.01	0.02	0.01	0.03	0.01	0.03	0.01	0.03	0.01
Polish	0.01	0.01	0.03	0.01	0.04	0.01	0.03	0.01	0.00	0.01	0.03	0.01
Jewish	0.04	0.01	0.05	0.01	0.02	0.01	0.03	0.01	0.07	0.01	0.03	0.01
Hungarian	0.03	0.02	0.02	0.02	0.03	0.02	0.00	0.02	-0.01	0.02	-0.01	0.02
Russian	0.08	0.02	0.00	0.02	0.00	0.02	0.01	0.02	0.06	0.02	-0.01	0.02
Portuguese	0.01	0.02	-0.04	0.02	0.03	0.01	-0.03	0.02	-0.01	0.01	0.00	0.01
Italian	0.02	0.01	-0.01	0.01	0.03	0.01	0.00	0.01	-0.04	0.01	0.00	0.01
Greek	-0.03	0.02	-0.07	0.01	-0.04	0.01	-0.12	0.02	-0.16	0.01	-0.10	0.01
Balkan	0.01	0.02	0.05	0.02	0.04	0.01	0.02	0.02	0.01	0.02	0.01	0.01
Spanish	0.08	0.05	-0.06	0.04	-0.04	0.03	-0.04	0.04	-0.08	0.04	-0.07	0.03
Ukrainian	0.03	0.01	0.02	0.01	0.03	0.01	0.01	0.01	0.00	0.01	0.03	0.01
Belgian	0.03	0.02	0.02	0.03	0.04	0.02	0.01	0.02	-0.01	0.02	0.01	0.02
White multiple	0.01	0.00	0.01	0.00	0.02	0.00	0.02	0.00	0.02	0.00	0.02	0.00
Arab w Asian	-0.01	0.03	-0.02	0.02	-0.02	0.02	-0.05	0.03	-0.01	0.02	-0.06	0.02
S. Asian	-0.03	0.03	-0.09	0.02	-0.03	0.01	-0.09	0.02	-0.15	0.02	-0.13	0.01
Chinese	0.01	0.01	0.00	0.01	0.02	0.01	-0.03	0.01	-0.07	0.01	-0.07	0.01
SE. Asian	0.05	0.02	-0.10	0.03	-0.07	0.04	0.05	0.02	-0.07	0.03	-0.24	0.04
Other Asian	-0.19	0.18	0.05	0.02	0.02	0.01	0.02	0.13	0.01	0.02	-0.05	0.01
African Black	-0.10	0.05	-0.15	0.04	-0.13	0.03	-0.14	0.05	-0.17	0.04	-0.15	0.03
Black	-0.12	0.05	-0.11	0.04	-0.13	0.04	-0.15	0.04	-0.22	0.04	-0.21	0.04
Caribbean	-0.10	0.02	-0.15	0.02	-0.06	0.01	-0.21	0.02	-0.12	0.02	-0.14	0.01
Spanish Latin	-0.17	0.09	-0.11	0.05	-0.07	0.03	-0.42	0.09	-0.13	0.05	-0.09	0.03
Vismin w white	-0.02	0.01	-0.02	0.01	-0.03	0.01	-0.03	0.01	-0.06	0.01	-0.04	0.01

Variables in model include: age cohorts, schooling, marital status, household size, official language ability, group status and 13 dummies for region (10 CMAs, a small CMA identifier and non-CMA identifier)

Source 1996, 2001, and 2006 census mainbase

Selection All Canadian-born residents of Canada, 25–64 years of age, whose primary source of income is from wages to salaries. People without any schooling were dropped from the sample as were those earning less than \$100 per year

**Table 6** Difference in earnings between Minority men and women compared to British origin men and women, controlling for personal and work characteristics, Canada, 1995–2005

Variable	Montreal						Toronto						Vancouver					
	2000		2005		1995		2000		2005		1995		2000		2005			
	coef.	s.e.	coef.	s.e.	coef.	s.e.	coef.	s.e.	coef.	s.e.	coef.	s.e.	coef.	s.e.	coef.	s.e.		
Female Observations	93,640		97,780		106,2010		79,130		84,383		88,585		42,505		43,692		46,475	
R2	0.50	0.46	0.53	0.50	0.53	0.54	0.48	0.53	0.48	0.53	0.54	0.50	0.54	0.50	0.50	0.49	0.49	
French	0.02	0.01	0.04	0.02	0.01	0.01	0.00	0.02	-0.03	0.02	0.02	0.02	-0.05	0.03	-0.01	0.03	0.03	
Dutch	-0.03	0.09	0.16	0.09	-0.01	0.08	0.01	0.03	0.00	0.03	0.06	0.02	-0.01	0.03	-0.06	0.03	0.01	0.03
Jewish	0.04	0.03	0.03	0.03	0.00	0.03	0.05	0.02	0.07	0.02	0.02	0.02	0.09	0.05	0.10	0.05	0.11	0.07
Portuguese	0.02	0.06	-0.02	0.04	0.01	0.03	-0.01	0.03	-0.04	0.02	0.02	0.02	0.02	0.07	-0.03	0.06	0.07	0.05
Italian	-0.04	0.02	0.00	0.02	0.01	0.01	0.00	0.01	-0.03	0.01	0.01	0.01	0.06	0.03	0.01	0.03	0.00	0.03
Greek	-0.13	0.03	-0.11	0.03	-0.07	0.02	0.02	0.02	-0.05	0.02	-0.02	0.02	0.04	0.07	0.00	0.07	-0.02	0.06
Arab w Asian	0.03	0.05	0.07	0.04	-0.01	0.03	0.05	0.06	-0.06	0.05	-0.03	0.04	0.15	0.16	-0.04	0.13	-0.11	0.09
S. Asian	-0.16	0.12	-0.16	0.09	-0.06	0.05	-0.09	0.04	-0.09	0.03	-0.04	0.02	-0.01	0.04	-0.08	0.03	0.07	0.02
Chinese	-0.03	0.06	0.03	0.06	-0.04	0.04	-0.04	0.03	-0.04	0.02	0.04	0.02	0.01	0.02	0.03	0.02	0.09	0.02
SE. Asian	-0.10	0.10	-0.20	0.13	-0.19	0.06	-0.03	0.03	-0.04	0.04	0.04	0.09	0.08	0.04	0.00	0.06	0.05	0.13
Other Asian	0.00		0.00	0.13	-0.02	0.06	0.49	0.65	0.01	0.03	0.04	0.02	-0.34	0.23	0.05	0.04	0.05	0.03
African Black	-0.09	0.18	0.07	0.12	-0.15	0.07	-0.18	0.10	-0.07	0.06	-0.18	0.05	0.36	0.21	-0.11	0.13	0.28	0.16
Black	-0.22	0.16	0.05	0.12	-0.20	0.10	-0.10	0.08	-0.05	0.06	-0.06	0.07	-0.17	0.27	-0.24	0.19	-0.19	0.34
Caribbean	-0.11	0.06	-0.19	0.04	-0.07	0.03	-0.05	0.03	-0.13	0.02	-0.04	0.02	-0.16	0.10	-0.17	0.11	-0.08	0.09
Spanish Latin	-0.13	0.25	-0.04	0.13	-0.04	0.06	-0.34	0.17	-0.09	0.07	-0.06	0.05	-0.07	0.21	-0.13	0.24	-0.03	0.13
Vismin w white	-0.06	0.04	0.00	0.04	-0.05	0.02	-0.08	0.03	-0.05	0.02	-0.01	0.02	-0.04	0.03	-0.05	0.03	-0.01	0.03

Male	Observations	97,430	98,418	103,040	79,140	83,999	86,640	45,185	45,096	47,130
	R2	0.44	0.39	0.48	0.50	0.44	0.47	0.50	0.46	0.45
	French	0.04	0.01	0.02	0.01	0.02	0.02	0.02	0.02	0.03
	Dutch	0.07	0.09	-0.15	0.07	0.05	0.02	0.03	0.01	0.03
	Jewish	0.01	0.03	0.03	0.03	0.00	0.02	0.02	0.05	0.05
	Portuguese	-0.06	0.06	-0.07	0.04	-0.06	0.03	0.02	0.07	0.06
	Italian	-0.07	0.02	-0.12	0.02	-0.10	0.01	0.01	0.02	0.02
	Greek	-0.16	0.03	-0.24	0.03	-0.10	0.02	0.02	0.06	0.05
	Arab w Asian	-0.02	0.05	0.04	0.04	-0.06	0.05	0.04	0.11	0.10
	S. Asian	-0.06	0.15	-0.13	0.08	-0.12	0.03	0.02	-0.19	-0.07
	Chinese	-0.11	0.06	-0.11	0.06	-0.20	-0.10	0.02	-0.06	-0.04
	SE. Asian	0.14	0.13	0.14	0.11	-0.32	0.07	0.09	0.03	0.07
	Other Asian	-0.43	0.73	-0.07	0.16	-0.09	0.07	0.02	-0.01	-0.03
	African Black	-0.43	0.19	-0.11	0.12	-0.12	0.07	0.05	0.13	0.17
	Black	-0.43	0.15	-0.33	0.13	-0.54	0.11	0.06	0.01	0.17
	Caribbean	-0.16	0.06	-0.17	0.04	-0.17	0.03	0.02	0.10	0.06
	Spanish Latin	-0.61	0.19	-0.07	0.10	-0.16	0.07	0.06	-0.23	0.14
	Vismim w white	-0.13	0.04	-0.05	0.04	-0.07	0.02	-0.05	0.03	-0.02

Source 1996, 2001, and 2006 census mainbase

Selection All Canadian-born residents of Canada, 25–64 years of age, whose primary source of income is from wages to salaries. People without any schooling were dropped from the sample as were those earning less than \$100 a year

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**Krishna Pendakur** has spent the last 17 years studying statistical and econometric issues relating to the measurement of economic discrimination, inequality and poverty. A group of papers (jointly written with Ravi Pendakur) established that visible minorities and Aboriginal people face great disparity in Canadian labour markets, and that this disparity shows no sign of eroding over time. A more recent group of papers has shown that Aboriginal people face staggeringly poor labour market outcomes. A different set of papers (with other co-authors) establishes that prices, especially shelter prices, matter a lot when we are trying to measure poverty and inequality, and lays out a set of methodologies for measuring these things in the face of price variation. A final group of papers lays out the econometric theory for measuring the cost-of-living and the cost-of-children. Taken together, these papers have advanced our understanding of economic inequality across groups in our society, and our understanding of how to adequately measure these things.



**Ravi Pendakur** is an associate professor with the Graduate School of Public and International Affairs at the University of Ottawa. Prior to joining the University he spent 18 years as a researcher in a number of federal government departments including, Multiculturalism and Citizenship, Canadian Heritage, and, Human Resources and Social Development. His primary research domain was, and continues to that of diversity, with a goal toward assessing the socioeconomic characteristics of language, immigrant and ethnic groups in Canada and other settler societies.