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Collaborative Unity and Existential Responsibility

BLACK-WHITE DIFFERENCES IN CANADIAN EDUCATIONAL ATTAINMENTS AND EARNINGS

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ABSTRACT

Aim/Purpose	Data from two large Canadian surveys are used to analyze educational and earnings performance of Blacks and Whites. The main purpose of this study is to determine how well blacks perform relative to Whites in these two areas.
Background	Canadian researchers have been studying black performance in education and labor markets since the 1970's. Much of this research was done before 2000. It showed that there was considerable discrimination in the way Blacks were treated in the labor market but fewer problems concerning their success in the educational system. Since then more data has become available and it is possible to re-examine this issue and explore new dimensions of black economic performance.
Methodology	Educational outcomes are categorical and are analyzed by ordered Beta probability models. Earnings functions are estimated by mixed linear regression models where the mixing procedure is used to account for unobserved differences in respondent ability.
Contribution	Our results update and expand what was known before 2016 using the most resent Canadian Census and Youth Smoking Survey of which the latter contains academic performance information for students in primary and secondary school.
Findings	The main results show that while Black males are able to access the educational system without much racial prejudice, they are not treated fairly in the labor market. Black females do less well in both the educational system and labor markets. Blacks earn significantly less than Whites for all age groups, all levels

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of education, and in all occupations. They are more likely to be less than fully employed and more likely to be at the bottom of the income distribution. These findings are consistent with earlier studies but the amount of discrimination is larger and black/white earnings differentials are larger than those found by researchers using earlier surveys.

Recommendation for Practitioners: These results are disturbing and the persistence over long periods of time suggests that some form of expanded government intervention is needed.

Recommendations for Researchers: The surveys used here provide inadequate information on the process of discrimination. More and better data is needed to understand why, for example, black students do less well than their white counterparts in primary and secondary school and yet overcome these problems in tertiary education.

Impact on Society: Discrimination of any sort is costly to the victims but is also detrimental to society as a whole since it represents a failure our institutions to deliver a fair and just society for all groups regardless of race or ethnicity. We hope our results will draw attention to the need to address this problem.

Keywords: Canada, Racism, Blacks, Ordered probability Models, Beta Distributions, Mixtures.

INTRODUCTION

Canada is a nation of immigrants. In 2016 visible minorities accounted for 21.6% of the population. As is the case for Blacks, which make up 5.6% of the population and are the third largest visible minority, most of them are first generation immigrants. Table 1 indicates that about 80% of Blacks were born outside of Canada. Whites, which are the remaining 78.4% of the population, also trace their ancestry to previous generations of immigrants mostly from Europe. As a result, Canada is an ethnically and racially diverse country. Most Canadians embrace the idea of cultural diversity and see Canada as an inclusive and upwardly mobile society where most people have a reasonable chance of getting access to the educational system and receive rates of remunerations which reflect their educational qualifications and abilities. The purpose of this study is to determine whether this optimistic view is an accurate reflection of the economic and social conditions facing Canadian Blacks by examining whether they have the same opportunity to obtain the benefits that are available to the majority of Canadians. Is access to higher education the same for Blacks as it is for Whites? Are the benefits of higher educational qualifications the same for both Blacks and Whites? Are poverty levels higher for Blacks than other Canadians? Why study Blacks? Blacks are the most visible of our visible minorities. They have been here since before confederation as noted by Milan and Tran (2004). They are also at the center of continuing social conflict. Most Blacks live in the two largest Canadian cities, Toronto and Montréal, where there has been some racial tension and conflict between Black youth and the police. Montréal is a recent example. There is a perception among black communities that Canadian and especially Québec society is racist. Many feel that they are not treated fairly in the markets which are most important to them. Previous research has shown that this is more than just a perception. Racism against Blacks is a reality and it is a serious problem that should be a major concern for those involved in the administration of Canadian social policy.

This study focuses on Blacks exclusively. The performance of other visible minorities also deserves scrutiny; but as our preliminary analysis uncovered, the visible minority category is quite heterogeneous and the differences between minority groups are as distinct as those between minorities and Whites, a point that was noted by Hum and Simpson (1999). The two largest minority groups are Chinese and South Asian but they differ in their cultural and linguistic origins and thus need to be considered separately. Due to the special nature of Aboriginal communities, research on them re-

quires specialized expertise which neither of us has, hence they are also not considered. Also, the data bases which are used here are probably not representative of First Nations.

Our approach to the analysis of differences in black-white performance measures is quite different from what other researchers have done. We focus on the transition of respondents from early age primary-secondary education, then to post-secondary education, and then on the labor market as mature adults. Blacks come into contact with various institutions as they progress through the system and can respond to them in different ways. We want to see how Blacks perform as they age and move through these institutions.

To briefly summarize our results, Blacks do less well than Whites in primary and secondary school. Their grades are lower on average that those of Whites although the differential decreases as they progress through high school. However, the picture is quite different at the post-secondary education level where, as other Canadian researchers have found using earlier data, Black males outside Québec do as well as other Canadians in obtaining a university bachelor's degree and outperform Whites in getting advanced degrees. Black females are less successful. The difference in performance between the two levels of education for Black males is a puzzle which is hard to explain but it is an important feature of the data and we will discuss it in more detail later. It is in the labor market that the poor performance of Blacks is most evident. Blacks earn much less than Whites on average regardless of gender. At each level of educational attainment Blacks earn significantly less than Whites. They are less likely to be fully employed and are always under-represented in highly paid or prestigious occupations. Like Pendakur and Pendakur (1998) we conclude that Blacks still face monumental racial discrimination in the labor market.

The paper has the following format. The next section examines educational performance data for primary and secondary school students from the 2010-11 Youth Smoking Survey (YSS). Section three continues the analysis of educational performance by looking at data from the 2016 census on post-secondary educational attainments. In section four income data from the same survey is analyzed. The results are for Canada excluding Québec except for those involving the YSS survey. What happens in Québec will be discussed in a later paper. The paper ends with a discussion of the results in section five.

RESULTS FOR PRIMARY AND SECONDARY SCHOOL STUDENTS

Others before us have considered the issue of race in post-secondary educational and economic performance. But it is our position that the analysis of the role of race in education should begin at a point as early as possible in the educational system. Consequently, our analysis of academic performance begins with the examination of self-reported respondent marks in primary and secondary school that were obtained from the 2010-2011 YSS. This survey targeted schools. Students from the selected schools completed a questionnaire and the responses to the question: 'Which of the following best describes your marks during the past year' is the measure of academic performance used here. The answers to this question generate a set of categories or intervals to which the respondent's marks belong. As is clear from Table 2 which contains the variable means from the 2010-11 YSS, the thresholds for the categories are known and do not have to be estimated as is usually the case for ordered probability models which are used in the analysis of this type of data. The dependent variable, g, is a decimal representation of a student's marks or grade performance. Since g lies between 0 and 1 the probability distribution chosen to represent this random variable has to reflect this. An ideal candidate for this type of data is the Beta distribution whose probability density function is

$$f(g) = \frac{\Gamma(\alpha)\Gamma(\beta)}{\Gamma(\alpha+\beta)} g^{\alpha-1}(1-g)^{\beta-1} \quad (1)$$

The mean of this distribution is $\alpha(\alpha+\beta)$ is. Regressors are introduced into the model by imposing the condition

$$\frac{\alpha_i}{\alpha_i + \beta} = \frac{\exp(X_i\gamma)}{1+\exp(X_i\gamma)} \quad (2)$$

In equation (2) β is a parameter to be estimated and α_i is a function which is specific to each respondent since it depends on the vector of regressors X_i; both have to be positive. The parameter vector γ is the same for all the respondents. Category probabilities are derived from the cumulative Beta distribution. For example, the probability of respondent *i* having a failing grade is

$$\Pr\{g_i \le 0.5\} = \int_0^{0.5} f_i(g)dg \quad (3)$$

and is easily computed numerically like a normal probability when f is the normal density function. The categorical probabilities are then used to construct a likelihood function whose logarithm of the contribution of respondent *i* is

$$\ln(\ell_i) = \{g_i \le 0.5\}\ln[\int_0^{0.5} f_i(g)dg\}] + \{0.5 < g_i \le 0.6\}\ln[\int_{0.5}^{0.6} f_i(g)dg\}] +$$
$$\{0.6 < g_i \le 0.7\}\ln[\int_{0.6}^{0.7} f_i(g)dg\}] + \{0.7 < g_i \le 0.85\}\ln[\int_{0.7}^{0.85} f_i(g)dg\}] +$$
$$\{0.85 < g_i \le 1.0\}\ln[\int_{0.85}^{1.0} f_i(g)dg\}] \quad (4)$$

which is then maximized to get estimates of (γ, β) parameters. The X_i vector contains the variables: age and school grade which are continuous variables. Grade refers to the school level, for example first year of high school, second year of high school and so on. Sex, fair and safe which are dummy variables where safe and fair are respectively: feeling safe in school and being treated fairly by the teacher. Race is a categorical variable for White, Black, Asian, Aboriginal and Others, and where White is the residual category. Region groups provinces into 5 different regions where Ontario is the residual regional category.

All of the estimated γ parameters were highly significant. Respondent marks decline with age and with school grade. Girls do better than boys and Whites do better than Blacks. All respondents have better marks if they feel safe in school and feel that they are being treated fairly by their teachers. These results are summarized in Table 3 which shows the effects of race on the probabilities of being in the top or bottom mark category. The differences by race are very large. For grade 6, white boys are 1.4 times more likely to be in the top mark category, ($g > 0.85$), than black boys. This differential increases as respondents get older and rises to 1.5 for grade 12 male students. For both Whites and Blacks, performance deteriorates as they progress through secondary school. The same story holds for girls; only the effects of race on performance are larger than is the case for boys.

The variables fair and safe are particularly important and their presence explains about 30% of the increase in ln-likelihood function over its base level. Being treated fairly by teachers doubles the odds of being in the top marks category for both males and females. This is unsurprising as the literature shows that teacher's view of a student's ability will be reflected in the student's performance (Hinnerich et. al. 2011). There is also a strong rank correlation in the data between this variable and marks, (0.17) for white males though it is less for black male students at (0.14). It is much higher for female students at (0.21) and (0.24) for white and black female students, respectively. Similarly, the variable feeling safe in school is a strong indication of willingness of the child to come to school and make the most of it. It is well-documented that victimized students will suffer from a compromised aca-

demic performance (Juvonen et. al. 2011). Feeling safe increases the odds of being in the top marks category versus the other categories by about 70%. These results are consistent with some of the earlier literature on black performance in primary and secondary school. The problems that black students face in the schooling system have been noted by an Ontario Government (1994) survey, Dei (1997), Brathwaite and James (1996), Codjoe (2001) and more recently by a York University study (2017).

RESULTS FOR POST-SECONDARY ATTAINMENTS

The 2016 census provides information on success in the Post-Secondary school system. In Table 1, the distribution of educational attainments for respondents aged 25 to 64 is shown for Whites and Blacks by gender. These are assumed to be terminal educational outcomes since all of the respondents are over the age of 25. This may not be completely accurate since not all respondents complete their education by age 25 but most do. The lowest category is less than a high school diploma with having an advanced degree above a bachelor's being the highest level of attainment. These categories are assumed to be ordered since they, for the most part, are ordered by the level of difficulty or ability required to obtain them. This is possibly not true for the categories in the middle of the table; some post-secondary programmes below that of a university degree may not require as much skill or effort as some of the trades. However, this is an empirical matter and the results of applying the standard ordered probability model to the data will determine whether this assumption is appropriate for the data.

Ordered probability models generate the categories in Table 1 which need to be explained by specifying a latent variable

$$y_i^* = X_i\gamma + u_i \ (5) \quad (5)$$

crossing a set of threshold points. In equation (5) u_i is a normally distributed random effect with mean 0 and variance 1. Let the category numbers in Table 1 be $\{y_i\}$ which take on the values 1 to 6. Then

$$\Pr\{y_i = 1\} = \Phi(\tau_1 - X_i\gamma) \quad (6)$$

$$\Pr\{y_i = k\} = \Phi(\tau_k - X_i\gamma) - \Phi(\tau_{k-1} - X_i\gamma) \quad k = 2,3..5 \quad (7)$$

$$\Pr\{y_i = 6\} = 1 - \Phi(\tau_5 - X_i\gamma) \ (8)$$

where:

$\{\tau_k: k= 1,2\ldots5\}$ is a sequence of increasing threshold points that need to be estimated and $\Phi()$ is the cumulative normal distribution function. These category probabilities then can be used to construct the likelihood function in the usual way.

Two probabilities are shown in Table 4. These are the probabilities of achieving less than a high school diploma and the probability of getting a university bachelor's degree or higher. These results are gender specific and quite different from the ones obtained in the YSS data for primary and secondary school academic performance for males. In post-secondary education, Black males do slightly better than white males except for the age group 25-29. They are less likely to stop their education before completing high school and slightly more likely to obtain a university degree than their white counterparts. For females, post-secondary education outcomes are more similar to what they were in the primary and secondary system although the black/white differentials are not as large. But the

differences are still large and highly significant with the younger age group exhibiting the largest black/white differences.

The estimated threshold coefficients are increasing and the differences are significant suggesting that the ordered probability model is an appropriate vehicle in which to examine post-secondary attainments.

These results like those reported for primary and secondary school are similar to what others have found. Some examples are Davies and Guppy (1999) and Abada et. al. (2010). There are some results on the importance of how long Blacks have resided in Canada. Simmons and Plaza (1998) found the more recent Black immigrants from the Caribbean were less likely to attend university than those born in Canada. We found no effect on post-secondary educational attainments of place of birth of the respondent or the respondent's parents.

DISCUSSION

The differences in the effect of race on the two levels of male education is a puzzling and unexpected result. However, our results are consistent with what other researchers have found for both levels of education. For primary and secondary schools both Dei et. al. (1997) and more recently James et. al. (2017) noted the pervasive nature of racism in Toronto area public schools and its negative effect on Blacks performance in school. Likewise Davies and Guppy (1999) produce results using the 1991 census which are very similar to what we found using the 2016 census on post- secondary educational attainments. Outside of Québec, race has little or no effect on male educational attainments but being a Black female reduces the probability of doing better at the post-secondary level.

On the other hand, the income data from the 2016 census display large black/white differentials for both genders. Yet these differentials do not translate into large differentials in male tertiary educational attainments. It is well known, McIntosh (2006) that family background variables like parent education and occupation are important in determining how far a respondent goes in the educational system. Many children inherit the educational qualifications of their parents. However, there are few differences between black and white parents of male respondents as far as education is concerned. But occupations and earnings are not the same for these two groups. There are large income differences by race for both males and females as Table 5a and 5b indicate. Blacks are more than twice as likely to be in the bottom quintile of the income distribution, much more likely not to be fully employed, and less likely to have prestigious jobs. Having low income parents often means poorer housing and lower quality schools. One would expect this to have an impact on educational performance for younger respondents. Household wealth has a significant effect on the Canadian PISA mathematics test score for 16 year olds for the year 2009, McIntosh (2019). While some of the literature on this topic finds low or negligible associations between family income and child school performance[1] other papers do not so it seems reasonable to accept that the racial differences in incomes and occupations are part of the cause of the racial differences in primary and secondary school performance.

But if this is the case, why is it that the deficiencies in black primary and secondary school performance do not continue on into tertiary education or more specifically why don't racial income differences affect tertiary educational outcomes? There are several possible explanations. First, students in primary and secondary school are enrolled in facilities which are much smaller and more personal than institutions like universities, for example, where relations between students and staff are much more detached or anonymous. In many cases university professors do not even know the names of their students. At this level there is much less scope for institutional influences involving individual characteristics like race or gender to affect academic performance. There are also no quality differences in tertiary educational institutions as there are in primary schools which are affected by the level of affluence of the neighborhood in which they are located.

The net result of this is that access for black males to the tertiary educational system is virtually unaffected by racial considerations. This not true for black females and that raises the question of why there is a gender dimension to access to tertiary education. For both races, females are much more successful in navigating through post-secondary educational institutions than males. However, the superior ability of white females to benefit from advanced educational opportunities is not matched by black females. As Table 3 shows, the academic performance of black girls was well below that of white girls in primary and secondary school. This differential has persisted and appears in tertiary education although it is not as pronounced. Boys were able to overcome whatever caused their lower in marks in primary and secondary school while girls were much less able to do this. Unfortunately, the data from the YSS provides no information as to why this happens.

While there are minimal racial differences in terminal educational attainments for black males, they are accompanied by large racial income differentials as Table 5a and 5b show. There is also little change over age groups so that substantially lower income is an unchanging characteristic of black households regardless of the educational attainment of the respondent; black disadvantage is a stable and enduring feature of the Canadian social landscape. However, it is not apparent that the cause of lower incomes among Blacks is low income of their parents. One of the most disturbing features of black labor market performance is the huge difference in the returns to getting an advanced degree above a bachelor's degree. As Table 5b shows, white males earn on average more than 32 thousand dollars for doing this; Blacks get only 5500 dollars. When we examine participation rates in high level occupations we find that Blacks are under-represented. By high level occupations we mean those whose average earnings are in the top quartile of the income distribution. For males, 23.5 percent of black university degree holders are in the bottom quartile and 40.7 percent are in the top quartile. Whereas for Whites with a university degree only, 8.7 percent are in the bottom quartile and 59.0 percent are in the top quartile. Thus it would seem that low black parental incomes are not the cause of low black respondent incomes; the real cause is just being black. Canadian labor markets discriminate against Blacks; black credentials and human capital simply do not command the same rewards that accrue to Whites. Although the picture that emerges is extremely bleak in terms of how unfairly Blacks are treated in Canada there is one bright spot on the landscape and that is the success that black males have had in utilizing the educational system. By and large, black males are not undereducated and in spite of some difficulties in getting through primary and secondary school they seem to be able to perform as well as Whites when it comes to obtaining terminal educational qualifications. The situation is not so favorable for black females. They are not as successful as white females at acquiring advanced educational qualifications.

What is important, however, is that the differentials between black and white male earnings have increased substantially from the 1990's to the most recent census. Differentials also increase with the level of education so that black efforts to improve their situation by getting more education are frustrated by the discriminatory methods that Canadian employers select and pay those who work for them1. This is racism against Blacks in the labor market pure and simple and it is a stain on Canada's reputation for being a fair and equitable country.

[1] Oreopoulos (2011) noted in his study of Canadian job applications that applicants with Asian sounding names had much lower chances of getting an interview. He also mentioned that other studies had exposed the same problems for Blacks.

APPENDIX

TABLES

Table 1: Variable Means for the 2016 Census

Variables	Males		Females	
	White (%)	Black (%)	White (%)	Black (%)
Canadian born	90.4	20.8	90.5	20.4
Father Canadian born	78.1	4.0	79.6	3.1
Mother Canadian born	79.3	3.1	78.2	2.7
Age (years)	42.8	40.2	42.4	41.3
Education				
Less Than A high School Diploma	12.6	10.8	8.4	10.8
High School Diploma	24.9	27.1	24.0	19.5
Trade Qualification	17.4	11.1	7.6	10.4
Post-Secondary Qualification	22.8	24.5	31.2	34.5
Bachelor Degree	15.0	15.2	20.0	16.8
Higher than Bachelor Degree	7.1	11.2	8.3	8.0
Total	100.0	100.0	100.0	100.0
Income (000)$	77.3	46.0	51.5	41.7
Region				
Atlantic	7.8	1.0	8.2	1.0
Québec	27.4	29.2	27.4	28.7
Ontario	34.7	51.1	35.6	56.9
Prairie	18.3	15.6	17.2	11.7
BC and NWT	11.8	3.0	11.5	1.9
Total	100.0	100.0	100.0	100.0
Sample Size	172,058	5,659	168,694	6,485

Table 2.Variable means: Youth Smoking Survey

Variables	Males		Females	
	White (%)	Black (%)	White (%)	Black (%)
Grade Distribution				
Grades ≥ 85%	24.7	18.3	33.4	22.8
Grades between 70%-84	45.6	41.2	46.5	46.4
Grades between 60%-69	22.0	26.6	15.6	23.9
Grades between 50%-59%	7.5	13.8	4.4	6.8
Grades < 50%	1.4	5.4	0.7	3.3
Total	100.0	100.0	100.0	100.0
Age	14.3	14.7	14.3	14.3
School Grade	9.0	9.4	9.1	9.0
Region				
Atlantic	32.1	18.3	33.3	12.3
Quebec	9.5	8.6	9.0	10.5
Ontario	17.4	29.4	18.6	35.7
Prairie	29.2	27.0	28.3	25.8
BC and NWT	11.8	16.6	10.7	15.7
Perception				
Fair	28.8	22.6	30.4	25.2
Safe	33.5	26.9	33.3	27.6
Sample Size	18,381	839	19,345	543

Table 3: Probabilities of Being in the Bottom and Top Grade Categories

Grade	Boys			
	Whites		Blacks	
	Bottom Probability	Top Probability	Bottom Probability	Top Probability
6	0.06	0.32	0.09	0.23
7	0.07	0.29	0.11	0.19
8	0.08	0.26	0.12	0.18
9	0.09	0.23	0.13	0.16
10	0.10	0.21	0.14	0.15
11	0.11	0.20	0.16	0.13
12	0.12	0.18	0.17	0.12
Average	0.09	0.24	0.13	0.16
Grade	**Girls**			
	Whites		**Blacks**	
	Bottom Probability	**Top Probability**	**Bottom Probability**	**Top Probability**
6	0.04	0.40	0.08	0.25
7	0.05	0.37	0.07	0.27
8	0.05	0.34	0.08	0.23
9	0.06	0.32	0.09	0.22
10	0.06	0.31	0.09	0.21

11	0.06	0.30	0.10	0.20
12	0.06	0.30	0.10	0.19
Average	0.05	0.33	0.09	0.22

Table 4: Probabilities of Education Attainment by Age Group, Gender and Race, Ages 25-64, Based On Data From the 2016 Census

Age Group	**Males**			
	Whites		**Blacks**	
	Less than HS Diploma	**Bachelor Degree**	**Less than HS Diploma**	**Bachelor Degree**
25-29	0.11	0.19	0.13	0.18
30-34	0.12	0.18	0.12	0.18
35-39	0.12	0.18	0.12	0.19
40-44	0.13	0.18	0.12	0.18
45-49	0.14	0.17	0.12	0.18
50-54	0.14	0.16	0.12	0.18
55-59	0.15	0.16	0.12	0.18
60-64	0.15	0.15	0.13	0.18
Average	0.15	0.17	0.12	0.18
Age Group	**females**			
	Whites			
	Less than HS Diploma	**Bachelor Degree**	**Less than HS Diploma**	**Bachelor Degree**
25-29	0.05	0.27	0.08	0.23
30-34	0.06	0.26	0.09	0.22
35-39	0.07	0.25	0.10	0.22
40-44	0.08	0.23	0.11	0.21
45-49	0.10	0.22	0.12	0.20
50-54	0.11	0.20	0.12	0.19
55-59	0.13	0.18	0.13	0.19
60-64	0.15	0.16	0.14	0.17
Average	0.10	0.22	0.11	0.21

Table 5a: Total Income (000's $) By Age Group, Gender and Race, Ages 25-64, Based On Data From the 2016 Census

Age Group	**Males**		**Females**	
	White	**Black**	**White**	**Black**
25-29	45.09	27.08	35.96	27.80
30-34	62.88	38.47	45.05	36.15
35-39	72.65	45.90	51.86	41.46
40-44	83.50	48.03	56.61	45.71
45-49	87.81	49.60	56.70	46.74
50-54	86.93	49.97	54.48	43.01
55-59	83.96	46.67	50.49	42.32
60-64	74.49	44.39	42.21	37.63

Table 5b:Total Income (000's $) By Educational Level, Gender and Race, Ages 25-64,Based On Data From the 2016 Census

Education	Males		Females	
	White	Black	White	Black
Less Than A high School Diploma	43.9	30.3	26.0	24.7
High School Diploma	59.5	35.9	38.2	31.6
Trade Qualification	66.2	38.5	34.2	33.4
Post-Secondary Qualification	74.7	44.7	47.4	42.1
Bachelor Degree	108.9	54.7	66.4	50.9
Higher than Bachelor Degree	141.1	60.2	85.2	57.7
Average	75.3	43.3	49.3	40.0

Table 6: Maximum Likelihood Parameter Estimates Of The Two Mixture Model of Income: Ages 25-64, Based On Data From the 2016 Census.

	Latent class 1		Latent class 2	
	Male	Females	Male	Females
Intercept Term				
White	66.2	38.5	34.2	33.4
Black	2.889	2.714	1.332	0.612
Variables	**White**			
ED2	0.217	0.347	0.413	0.401
ED3	0.389	0.305	0.500	0.249
ED4	0.470	0.585	0.821	0.674
ED5	0.662	0.890	1.065	1.114
ED6	0.840	1.098	1.338	1.111
	Black			
ED2	0.166	0.234	0.213†	0.624†
ED3	0.292	0.333	0.511	0.504†
ED4	0.416	0.482	0.750	0.897
ED5	0.584	0.717	0.629	1.412
ED6	0.652	0.874	0.629	1.169
Average Income				
White	90.54	63.32	39.66	21.82
Black	61.88	53.73	17.63	19.66
Latent Class Probability	0.772	0.694	0.228	0.316

Table notes: Education categories are the same as those listed in Table 1. Estimates with no superscript are significant at the 1% level. † indicates not significant at 10%

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