

Self-employment Among Immigrants: A Test of the Blocked Mobility Hypothesis

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Abstract

The blocked mobility or relative disadvantage thesis posits that because of relative disadvantages experienced by immigrants in the labour market in the host society, many will turn to self-employment as an alternative to wage-labour. Part of the difficulty with previous research in this area is the failure to distinguish between self-employment in professional and non-professional occupations. On the basis of the 1986 Canadian census data, our findings show that the blocked mobility thesis is supported in the case of immigrants with high educational credentials obtained from home countries, who have a higher likelihood of turning to self-employment in non-professional occupations, compared to those with similar education levels among either the native-born or immigrants with Canadian education.

Résumé

Une thèse concernant les immigrants dans la main d'oeuvre veut que ceux-ci manquent les occasions de mobilité et qu'ils poursuivent donc l'alternative de l'emploi à leur propre compte. La recherche antérieure ne distingue pas suffisamment l'emploi à son propre compte selon les domaines professionnels et non-professionnels. À base des données du recensement canadien de 1986, nous déterminons que cette thèse se voit confirmée dans le cas des immigrants avec hauts niveaux d'éducation obtenue à l'extérieur du Canada, qui ont en effet une plus forte probabilité d'emploi à leur propre compte, comparé à ceux qui ont un niveau semblable d'éducation soit en tant que natifs du Canada ou en tant qu'immigrants avec une éducation canadienne.

Key Words: blocked mobility, educational level, self-employment

Since the mid-1970s, because of the reversal in the decline of self-employment rates in almost all major Western industrial nations, social scientists have become increasingly interested in self-employment (see Granovetter, 1984). The central objective of this paper is to address the differential self-employment propensities between the native-born, immigrants with Canadian education, and immigrants with no Canadian education.

The blocked mobility thesis proposes that labour market arrangements segregate certain groups, creating barriers to their mobility. In particular, Waldinger et al. (1985) have proposed an interactive approach that was later refined by Kim et al. (1989) in their study of the differences in business participation among three Asian groups (Korean, Chinese, and East Indian). Kim et al. (1989) suggested that successful business participation might be regarded as the interaction between the opportunity structures for immigrants and their characteristics. It has been suggested that immigrants experience various kinds of disadvantages in the labour market in North America (see Light, 1979; Satzewich and Li, 1987). Many immigrants suffer from unfamiliarity with the social, economic, and legal structures of the host society, difficulties with languages, non-recognition of credentials and discrimination. It is argued that they may experience difficulties in finding jobs in the core sectors of the economy, especially if they do not have additional education or training in the host country (Kim et al., 1989; Min, 1984). Perceiving dim prospects in the labour market, immigrants might consider self-employment as an alternative. As emphasized by Kim et al. (1989), the crucial variable here is differential rewards between self-employment and working as a wage-earner. In other words, disadvantages in the labour market must coincide with the demand for small business activities (as manifested by market rewards) to create an incentive among immigrants to pursue self-employment.

While the blocked mobility or disadvantage thesis proposed by Kim et al. (1989) is at the structural level, Stanworth and Curran (1973) propose a "social marginality" theory at the social-psychological level. By 'social marginality' they mean a situation where individuals perceive their personal attributes to be superior to the role or roles they occupy in the society. Self-employment may be an alternative to available occupational roles. Stanworth and Curran (1973) have specifically mentioned immigrants as a potential pool of 'socially marginal' people, since their abilities are often not recognized by the host society, hence the discrepancy between their abilities and their occupational roles in the host society. Perceiving this discrepancy, it is theorized that immigrants will have higher self-employment propensities than the native-born population.

Previous Empirical Research

Investigating the 'disadvantage' or the blocked mobility thesis, Aldrich (1977) reports that 22% of Asian shopkeepers in Britain had college degrees, whereas the comparable figure for white shopkeepers is 3%. Aldrich regards

this as direct evidence for the blocked mobility thesis. Similarly, employing U.S. data on three Asian immigrant groups (Korean, Chinese, and East Indian), Kim et al. (1989: 78) found that immigrants who had graduated from colleges or universities in their home countries but with no further education, are more likely to be involved in non-professional small businesses than either non-college graduates or graduates with M.A., Ph.D. or other comparable degrees (these higher degrees were most likely to have been obtained in the United States).

It must be pointed out that there has been a fundamental difficulty with much previous research on self-employment; namely, the failure to differentiate between self-employment in professional occupations, and self-employment in non-professional occupations. For example, Borjas and Bronars (1989: 597) and Rees and Shah (1986) found that higher education tends to raise the probability of self-employment. This result may appear perplexing if we consider the effects of education on the earnings of employees and the self-employed. Maxim (1992) and Rees and Shah (1986: 107) have found that the effect of education on the earnings of the self-employed is smaller than on the earnings of wage-earners. If this is the case, and as long as jobs are available, then people with higher education should have less inclination to be self-employed than people with lower education. As a possible solution to this puzzle, Rees and Shah (1986) posited that higher education would probably reduce the variance in the earnings of the self-employed, thereby reducing the risks associated with this employment, and raising people's propensities towards self-employment.

It is alternatively argued here that education may have a very different impact on the two types of self-employment. Higher education may result in higher self-employment propensities in professional occupations, but may have an opposite effect on self-employment in non-professional occupations. Therefore, the general statement that higher education will lead to higher self-employment propensity is misleading. This view on the need to differentiate between different types of self-employment has also been expressed by Cobas (1986: 105-106). His study on Cuban entrepreneurs in Puerto Rico confirmed that the paths leading to different types of self-employment are quite divergent. More specifically, it is found that merchants usually have low education, a business background, and a perception of hostility from the indigenous population, while membership in the independent professional category is associated with a business background, prior participation in the ethnic sub-economy as employees, but not low education or a perception of hostility (Cobas, 1986: 113). Kim et al. (1989: 81) have also emphasized the need to differentiate self-employed small

business owners (in non-professional occupations) from self-employed professionals. For these reasons, this paper concentrates on the propensity for self-employment in non-professional occupations.

Hypotheses

The 'relative disadvantage' thesis predicts that immigrants with no Canadian education will experience various kinds of disadvantages in the Canadian labour market as their educational credentials are often not recognized, either because of discrimination or because the training in their home countries does not match the requirements of the Canadian labour market. As a result, it is very difficult for them to find jobs in the main sector of the economy. Faced with the dim prospects in the labour market, these immigrants will turn to self-employment as an alternative.

Further, it may be posited that Canadian employers may treat immigrants with no Canadian education as a single category of persons with no recognizable educational credentials. Those with higher educational credentials may consequently experience a more serious mismatch between their personal characteristics (especially educational backgrounds) and the kind of jobs they can find in the labour market. Hence, it can be argued that it will be those with higher education who will have higher self-employment propensities in non-professional occupations compared to their counterparts among the native-born or immigrants with Canadian education.

Our first hypothesis expects that the self-employment pattern of immigrants with Canadian education will be similar to the native-born Canadian population. The second hypothesis is that immigrants with higher educational credentials (college diploma and above) but no Canadian education will have higher propensities towards self-employment in non-professional occupations than those with same levels of education among the native-born population or immigrants with Canadian education. The third hypothesis is that at the lower levels of education (no educational credentials, high school diploma only, and trades diploma only), there will not be much difference in the propensities towards self-employment in non-professional occupations among the native-born, immigrants with Canadian education, and immigrants with no Canadian education.

A serious problem in analyzing these hypotheses is that non-Canadian education may be confounded with racial origin. For instance, if immigrants without Canadian education are from Third World countries while those

with Canadian education are of European origin, then the variance attributed to non-Canadian education may in effect be measuring the racial origin of immigrants. DeSilva (1992) addressed this problem by analyzing separately those immigrants who received all of their education and experience in Canada. He found evidence of discrimination based on place of origin for those immigrants who received some of their education and labour market experience in their home countries, but racial origin was largely not playing a role in the income of immigrants who had completed their education in Canada. The present analysis will also undertake to make separate comparisons of two place of origin groups to the Canadian-born.

Data and Methods

The data used in this study are drawn from the public use sample tape (P.U.S.T.) file on individuals from the 1986 quinquennial Census of Canada. The file contains a sample of 500,000 individuals, or approximately 2% of the population. As our main interest is in analyzing paid-employment, self-employment in non-professional occupations and self-employment in professional occupations, we have excluded the small number of unpaid family workers. We have also restricted our study to the non-agricultural, non-Aboriginal Canadian population aged 30 and over residing in Quebec, Ontario, the Prairie provinces, and British Columbia. The final sample comprises a total of 144,682 cases, with 8,719 self-employed small business owners in non-professional occupations ('self-employed non-professionals' hereafter), 7,588 self-employed professionals, and 128,375 wage-earners. Note that self-employed non-professionals may be regarded as a segment of the informal labour market. Unfortunately, we are unable to include other segments of the informal labour market, such as employees in the 'periphery' sectors of the economy.

The primary independent variable of interest will be the interaction term between 'educational levels' and 'immigration status': native-born, immigrants with Canadian education, and immigrants without Canadian education. Since the place at which immigrants finished their education is not directly measured in the census, the latter variable was constructed on the basis of age at immigration and highest completed education¹. The control variables include age, gender, marital status, region, knowledge of English or French languages, and ethnic origins.

Findings

In 1986, the overall self-employment rate stood at 11.27%; non-professional occupations accounting for 6.03% and professional occupations accounting for 5.24%. The remaining 88.73% of the population are wage-earners.

TABLE 1. EMPLOYMENT STATUS BY IMMIGRATION STATUS WITHIN DIFFERENT LEVELS OF HIGHEST DEGREE, CERTIFICATE OR DIPLOMA, FOR CANADIANS 30 AND OVER, 1986.

	Total employed population N=	Self-employed non- professionals %	Self-employed professionals %
<i>No degree, cert./dipl.</i>			
Native-born	39,756	7.43	3.32
Immigrants with Canadian education	3,989	10.00	5.26
Immigrants with no Canadian education	9,532	7.98	2.99
<i>Secondary (high) school grad. cert.</i>			
Native-born	22,560	4.79	4.16
Immigrants with Canadian education	2,119	5.90	5.24
Immigrants with no Canadian education	3,460	6.76	5.29
<i>Univ./non-univ. cert./dipl. below bachelor's</i>			
Native-born	30,396	6.20	4.20
Immigrants with Canadian education	3,111	8.71	5.56
Immigrants with no Canadian education	7,877	7.58	5.65
<i>Bachelor's degree(s) and above</i>			
Native-born	15,828	1.66	11.85
Immigrants with Canadian education	2,484	1.57	12.32
Immigrants with no Canadian education	3,903	3.23	12.27
<i>Total</i>	144,682	6.03	5.24

Source: PUST 1986 Canadian Census.

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Table 1 provides the percentages of self-employed in professional and non-professional occupations for the native-born, immigrants with Canadian education and immigrants with no Canadian education, at different levels of education. Among people with no degree, certificate, or diploma, immigrants with Canadian education have the highest self-employment rate in non-professional occupations. Among people with high school certificate only or post-secondary education below the level of bachelor's degree(s), both immigrant groups have higher self-employment rates in non-professional occupations. Among people with bachelor's degree(s) or higher education, immigrants with Canadian education have a similar level of self-employment rate in non-professional occupations as their native-born counterparts, whereas immigrants with no Canadian education have a rate twice as high. Overall, people with bachelor's degree(s) or higher education have much lower self-employment rates in non-professional occupations than people with lower education.

TABLE 2. SUMMARY CHI-SQUARE STATISTICS; MULTINOMINAL LOGIT MODEL WITH NINE INDEPENDENT VARIABLES (INCLUDING ONE INTERACTION TERM) RELATED TO EMPLOYMENT STATUS¹, FOR CANADIANS 30 AND OVER, 1986.

<i>Source</i>	<i>D.F.</i>	<i>Chi-square</i>	<i>Prob.</i>
Intercept	2	540.40	<.01
Gender	2	951.94	<.01
Age	14	775.09	<.01
Marital status	2	6.24	<.05
Ethnic origins	50	1450.88	<.01
Region	6	394.65	<.01
Knowledge of English or French	2	15.28	<.01
Immigration status ²	4	219.52	<.01
Highest degree, cert./dipl.	6	525.28	<.01
Immigration status by highest degree, cert./dipl.	12	89.76	<.01
Residual	31814	8133.58	n.s.

1. The categories of "employment status" are self-employed professionals, self-employed non-professionals and wage-earners.
2. The categories of "immigration status" are the Canadian-born, immigrants with Canadian education and immigrants without Canadian education.

Multivariate Analyses

As the dependent variable of employment status is a nominal variable with three categories, multinomial logistic regression will be used in the model. Table 2 provides the summary chi-square table for this model. Overall, this model has a pseudo R^2 of about .375. The residual of the model is insignificant, indicating that no higher order interaction terms are needed. At the .05 alpha level, all variables in the model are significant. The fact that the interaction term between immigration status and education levels is significant suggests that within a given educational level, people with different immigration statuses (native-born, immigrants with Canadian education or immigrants without Canadian education) have different propensities towards self-employment in professional and non-professional occupations. The testing of the central hypotheses relies upon the interpretation of this interaction term.

Before discussing the central hypotheses, the Appendix provides the basic results on the effects of other demographic, cultural, and geographic variables. The odds of becoming self-employed in non-professional occupations in relation to becoming a wage-earner (simplified hereafter as the conditional odds) is $1.4930/0.6690 = 2.2317$ times as high for males as it is for females. The conditional odds are similar across age groups except for the youngest group where conditional odds are significantly lower, and the oldest for whom the odds are significantly higher. The conditional odds of people who speak at least one of the official languages in Canada is 1.6646 times that of people who speak neither language. By ethnic origin, people of Jewish, West Asian and Arabian, East or South East Asian, or Greek origins have the highest conditional odds, while people of British, French, Filipino, Black, African Black & Caribbean origins have the lowest conditional odds. This would indicate that visible minority status does not play a systematic role.

Table 3 presents the conditional odds of becoming self-employed non-professionals for the three immigrant status categories being considered: native born, immigrants with Canadian education and immigrants without Canadian education. This is calculated through the main effects of, and the interaction effect between, the variable of immigration status and the variable of education levels. The table gives the results by level of education, controlling for the series of factors presented in Table 2. Both immigrant groups have higher conditional odds towards self-employment than the native-born. However, there are important differences between the two immigrant groups by level of education. Below bachelor's degree(s),

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immigrants with no Canadian education have either similar or lower conditional odds towards self-employment than immigrants with Canadian education. At the level of bachelor's degree(s) or higher education, immigrants with no Canadian education have 1.7219 (0.8481/0.4926) times higher conditional odds towards self-employment in non-professional occupations than immigrants with Canadian education. Equally important, at this education level, the conditional odds of immigrants with Canadian education are very similar to those of the native-born.

TABLE 3. CONDITIONAL ODDS OF BECOMING SELF-EMPLOYED NON-PROFESSIONALS OR SELF-EMPLOYED PROFESSIONALS FOR THE NATIVE-BORN AND THE TWO GROUPS OF IMMIGRANTS AT DIFFERENT EDUCATIONAL LEVELS, CONTROLLING FOR OTHER DEMOGRAPHIC, CULTURAL AND HUMAN CAPITAL INDEPENDENT VARIABLES RELATED TO EMPLOYMENT STATUS, 1986 CENSUS POPULATION AGED 30 AND OVER.

	<i>Conditional Odds</i>		
	<i>Native-born</i>	<i>Immigrants with Canadian Education</i>	<i>Immigrants with no Canadian Education</i>
<i>Self-employed non-professionals</i>			
No degree, cert./dipl.	0.9756	1.5730	1.1571
Secondary (high) school grad. cert.	0.8280	1.4731	1.5487
Univ./non-univ. cert./dipl. below Bachelor's	0.9174	1.6323	1.1861
Bachelor's degree(s) and above	0.4018	0.4926	0.8481
<i>Self-employed professionals</i>			
No degree, cert./dipl.	0.4424	0.9209	0.5984
Secondary (high) school grad. cert.	0.6773	1.4608	1.1666
Univ./non-univ. cert./dipl. below Bachelor's	0.6148	1.3233	0.8557
Bachelor's degree(s) and above	1.6273	1.8733	1.6746

It has been suggested that immigrants from Third World countries may especially suffer from non-recognition of their education obtained outside of Canada (Breton, 1990; McDade, 1988; Richmond, 1988). This would lead to the expectation that self-employment in non-professional occupations would be particularly high in this group. In order to test this hypothesis, we have run two other separate models: one includes the native-born population and immigrants from Third World countries, while the other includes the native-born and immigrants from traditional immigrant countries (Europe and the United States). These two separate analyses produced very similar findings to those reported in Table 3. It would appear that nonrecognition of foreign education does not apply only to immigrants from Third World countries. If we use propensities toward self-employment in non-professional occupations as an indirect measure of nonrecognition of foreign education, our findings suggest that this applies to immigrants from traditional immigrant countries as well. We would conclude that the crucial factor is whether the education was obtained outside of Canada, not the racial origins of immigrants. This corroborates DeSilva's (1992) finding that racial origin was not playing a role in the income of immigrants who had completed their education in Canada. In our two separate models, we have also experimented with including and excluding the variable of ethnicity as a control variable, based on the consideration that the influence of ethnicity may have been partially captured by the division of immigrants into traditional and Third World sources. However, this did not change the overall results.

Conclusions and Discussion

These findings seem to support our central hypothesis (i.e., the second hypothesis): immigrants with higher educational credentials but no Canadian education will have higher propensities towards self-employment in non-professional occupations because of "relative disadvantages", blocked mobility, or specifically the non-recognition of educational credentials. This seems to be especially true at the bachelor's level and above. At these education levels, there is a clear pattern of immigrants with no Canadian education having much higher conditional odds of becoming self-employed in non-professional occupations than both the native-born and immigrants with Canadian education.

Our findings, however, do not support the two other hypotheses. Our third hypothesis was that, at the lower levels of education, there will not be much difference in the propensities towards self-employment in non-professional occupations among the native-born, immigrants with Canadian education,

and immigrants with no Canadian education. Judging from Table 3, at the lower levels of education, there are considerable differences in the conditional odds towards self-employment in non-professional occupations for these three groups. More specifically, both immigrant groups have higher conditional odds than the native-born, and immigrants with Canadian education usually have the highest conditional odds.

These findings only partially support our first hypothesis that the self-employment pattern of immigrants with Canadian education will be similar to the native-born Canadian population. At the education level of bachelor's degree(s) or higher, immigrants with Canadian education do have a similar self-employment propensity in non-professional occupations compared to their native-born counterparts. However, at the lower levels of education, immigrants with Canadian education have much higher conditional odds towards self-employment in non-professional occupations than the native-born. Also, the propensity to be self-employed in professional occupations tends to be highest among immigrants with Canadian education.

To reiterate, our findings seem to suggest that at lower levels of education, immigrants as a whole have higher self-employment propensities in non-professional occupations than the native-born Canadians. An explanation for this may be provided by the interactive approach (Waldinger et al., 1985; Kim et al., 1989) which we mentioned at the beginning of this article. More specifically, this approach suggests that successful business participation may be regarded as the interaction between the opportunity structures for immigrants in the labour market and in small businesses, and the characteristics of immigrants. On the one hand, there may be an economic niche in which small businesses are viable. On the other hand, immigrants might possess various kinds of informal resources that may be helpful to the setting-up and running of small businesses. These informal resources may include cheap and loyal ethnic labour (Waldinger et al., 1985), the ability to make transactions in the native languages of immigrants, information concerning the preferences of immigrants, and links with the origin countries of immigrants.

We have also noticed that at lower levels of education, immigrants with Canadian education generally have higher conditional odds towards self-employment in non-professional occupations than both immigrants with no Canadian education and the native-born Canadians. It might be speculated that these immigrants, having had some education in Canada and experience in the home countries, have the resources that are less available to either the native-born or immigrants with no Canadian education.

Economic opportunities for self-employment and the informal business resources possessed by immigrants, however, do not totally explain why at higher levels of education, immigrants with no Canadian education have much higher conditional odds towards self-employment in non-professional occupations than immigrants with Canadian education and the native-born Canadians. This would suggest that these immigrants with high educational credentials obtained from outside of Canada may be experiencing especially high levels of disadvantages in the labour market. Their "blocked mobility" may result from the lack of recognition of their abilities, especially as represented by formal training. This discrepancy between abilities and occupational roles in the Canadian labour market would appear to affect not only immigrants from Third World countries, but also immigrants from traditional sources. Faced with this situation, this group of immigrants will have much higher propensities towards self-employment in non-professional occupations than their counterparts among the native-born and immigrants with Canadian education.

In part, our findings suggest that self-employment represents real economic opportunities for immigrants. Immigrants may possess various kinds of informal resources to exploit the opportunities for self-employment in the non-professional sector. Our findings also suggest that as far as the access to opportunities in the labour market is concerned, the crucial factor is not whether an individual is an immigrant or not, rather, it is whether the individual has completed at least the last part of education in Canada. Previous literature has documented that second generation immigrants are more successful economically than either the first generation immigrants or the Canadian-born of the third and higher order generations (e.g., Chiswick and Miller, 1988). It is therefore important to continue to pay attention to the relative economic situation of immigrants with Canadian education. For immigrants with no Canadian education, it would be important to further examine the extent to which their difficulties in the labour market arise from education that is not suitable for the Canadian economy, or from discrimination in the labour market. This will enable policy makers to either expand the education programs for immigrants, or to establish review boards that would properly assess and certify the quality of education obtained outside of Canada.

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Footnotes

1. Immigrants were categorized with regard to whether or not they obtained some of their education in Canada through the variables on age at immigration and highest education. Immigrants who are coded as having no Canadian education include the following cases: those who have immigrated into Canada at age 20 or more and who have no formal educational credentials, or a high school diploma only, or a trades certificate/diploma, or another non-university/university certificate/diploma below bachelor's level, or bachelor's degree as their highest degree, certificate or diploma; those who have immigrated into Canada at age 25 or more and who have a Master's degree, or a degree in medicine, dentistry, veterinary medicine or optometry, or another university certificate/diploma above bachelor's level but below earned doctorate level, as their highest degree, certificate or diploma; and those who have immigrated into Canada at age 30 or more and who have earned doctorate. Other immigrants are regarded as having some Canadian education. With regard to immigrants with bachelor's degrees as their highest level of education, it would probably have been preferable to use age 22 to divide them into those who have completed at least part of their education in Canada and those who have completed all of their education in the country of origin. However, the categorization of the variable of age at immigration in the 1986 census was not detailed enough to permit such a division. Using age 20 as the division point may have placed some immigrants who have completed part of their bachelors' degree in Canada in the category of immigrants who have obtained all of their education in the country of origin. However, this division will only underestimate the true differences between the two categories of immigrants. In other words, the present division provides a more conservative test to our hypotheses.

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APPENDIX. EFFECT PARAMETERS AND CONDITIONAL ODDS TOWARDS SELF-EMPLOYMENT IN NON-PROFESSIONAL OCCUPATIONS FOR CONTROL VARIABLES IN THE MULTINOMIAL LOGIT MODEL.

<i>Variable</i>	<i>(%)</i>	<i>Effect (lambda)</i>	<i>Conditional Odds</i>
<i>Gender</i>			
Male ¹	(56.19)	0.4008	1.4930
Female	(43.81)	-0.4008***	0.6698
<i>Age</i>			
30-34	(21.59)	-0.3419***	0.7104
35-39	(20.19)	-0.1713***	0.8426
40-44	(16.00)	-0.0748***	0.9279
45-49	(12.61)	0.0464	1.0475
50-54	(10.80)	-0.0256	0.9747
55-59	(8.99)	0.0463	1.0474
60-64	(6.23)	0.0238	1.0241
65+ ¹	(3.59)	0.4971	1.6439
<i>Marital Status</i>			
Presently married	(78.90)	-0.0411**	0.9597
Otherwise ¹	(21.10)	0.0411	1.0420
<i>Region</i>			
Quebec	(27.10)	-0.1697***	0.8439
Ontario	(42.14)	-0.2557***	0.7744
The Prairies	(17.79)	0.1209***	1.1285
British Columbia ¹	(12.97)	0.3045	1.3559
<i>Knowledge of English or French languages</i>			
At least one	(99.14)	0.2548**	1.2902
Neither ¹	(0.86)	-0.2548	0.7751
<i>Ethnic origins</i>			
British	(33.19)	-0.7075***	0.4928
French	(24.45)	-0.5792***	0.5603
Dutch	(1.56)	0.0959	1.1006
German	(4.53)	-0.1276**	0.8802
Scandinavian	(0.94)	0.1377	1.1476
Hungarian	(0.62)	0.4640**	1.5904
Polish	(1.20)	0.1471	1.1585
Ukrainian	(2.29)	-0.1827**	0.8330
Croatian, Serbian, Slovenian, Yugoslav n.i.e.	(0.62)	0.1096	1.1158
Greek	(0.74)	0.5608***	1.7521
Italian	(3.55)	-0.1672***	0.8460
Portuguese	(0.88)	-0.3066**	0.7359
Jewish	(1.49)	0.8033***	2.2329

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Appendix cont'd.

Other European single responses	(1.95)	0.2147**	1.2395
West Asian & Arab origins	(0.53)	0.6457***	1.9073
South Asian	(1.21)	-0.4681***	0.6262
Chinese	(1.73)	0.1647*	1.1790
Filipino	(0.55)	-0.5599*	0.5713
East/South East Asian Origins	(0.66)	0.6172***	1.8537
Black, African Black & Caribbean origins	(1.05)	-0.5188***	0.5952
Other single responses	(0.46)	0.2727	1.3135
British and French	(3.75)	-0.4064***	0.6660
British and other	(7.15)	-0.4415***	0.6431
French and other	(1.14)	0.2420*	1.2738
British and French and other	(1.25)	0.0835	1.0871
Other multiple responses ¹	(2.50)	-0.0934	0.9108

N=144,682

* p<.10 ** p<.05 ***p<.01

1. Indicates the contrast categories in the independent variables.
2. Parameters were estimated employing the CATMOD procedure in SAS. Contrasts were wage-earners in the dependent variable and those indicated as reference categories in the independent variables. All effects within a particular variable sum to 0.