

Factors Affecting Self-Employment among Indian and Black Caribbean Men in Britain

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ABSTRACT. The central issue addressed in this paper is encapsulated in the fact that many Indians, but relatively few black Caribbeans, are self-employed in Britain. This paper suggests two factors: first, black Caribbeans were "ethnically disinclined" to enter business; second, they did not possess the attributes that were positively related to entering business. Using data from the 1991 Census, this paper pinpoints how much of the observed paucity of self-employed black males in Britain was due to ethnic disinclination and how much was due to attribute disadvantage. More generally, it points to the importance of harnessing attitudes to attributes for generating a high rate of entry into self-employment. In this context, the acquisition of "social" attributes that relate to family formation, and the welding of the family into a cohesive economic unit, are at least as important as those attributes, like education, which relate purely to the individual.

1. Introduction

An important development, over the past two decades, in the labour markets of industrialised countries has been the growth of self-employment.¹ More than that, the increasing visibility of ethnic minorities in self-employment – South Asians in Britain, the Surinamese in Amsterdam, the Turks in Germany, the North Africans in France, and East Asians in North America – suggests that these minorities have made a major contribution to such growth (Boissevain, 1992; Light et al., 1994). In Britain, the rise in self-employment coexists with the fact that unemployment rates in Britain, for persons belonging to several of the ethnic minorities, are substantially higher than for the white population.² However,

among the ethnic minorities, the unemployment rate for Indian men who were self-employed was substantially higher than that of black Caribbean or, indeed, white men.³

It is tempting to argue from this constellation of facts that self-employment offers an escape route out of the difficulties, that persons from ethnic back-grounds face, in finding jobs and part of the reason that Indian men have a lower unemployment rate than their black Caribbean counterparts is that they take this route in relatively larger numbers. In this context, therefore, the important question is, Why is self-employment embraced by Indians but not by black Caribbeans?⁴ The central purpose of this paper is to address this question.⁵

There are two possible answers. The first is that Indians are "ethnically" predisposed towards self-employment in a way that black Caribbeans are not. Such a statement has a number of separate, but related, dimensions. The cultural mores of Indians, allied to their network of family and business relationships, in conjunction with their extended-family structure with its emphasis on pooled savings, means that it is both socially acceptable and economically feasible for Indians to be self-employed.⁶ Overlaying this aspect is the fact that, in terms of life-style, Indians are less assimilated than black Caribbeans⁷ and they, therefore, see Britain less as a "home" and more as a "work-place". A consequence of this perception is that Indians emphasise, to a greater degree than do black Caribbeans, qualities like hard work and thrift which are intimately related to self-employment. The second possible explanation for relatively high Indian rates of entry into self-employment is that Indians are better endowed than black Caribbeans with the attributes that are

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positively associated with self-employment. In the language of Sen (1993), the first type of advantage stems from an enhanced desire on the part of Indians to *function* as self-employed persons whereas the second type of advantage stems from an enhanced *capability* of Indians to be self-employed.

In itself, as Light (1984) observed, the overrepresentation of selected ethnic minorities in self-employment is an anomaly. Minority ethnic status is a symbol of disadvantage, yet certain ethnic minorities are able to juxtapose their lack of success at becoming employees with spectacular success at employing themselves. By the same token, other ethnic groups conform to the stereotype of generalised disadvantage by complementing their lack of success in one area of employment with failure in another.

This paper aims to identify how much of the greater participation of, Indian men in self-employment – relative to white and black Caribbean men – is due to “ethnic advantage” and how much is due to “attribute advantage”. It does so by comparing the chances of economically active white, black Caribbean and Indian⁸ men, aged 21–65 years, living in metropolitan areas⁹ of Britain, of being in self-employment. Although focused on self-employment, this study emphasises the choice that individuals make between one of three possible labour market states: unemployment, employment as an employee, and self-employment.

Some persons, who may have no realistic chance of becoming employees, are “pushed” into self-employment because it offers a better alternative to unemployment. Others are “pulled” into self-employment, possibly from employee status, attracted by the rewards and independence that it offers. Although the evidence is that for Indians it is the “pull”, rather than the “push”, factors that are mainly the cause of their entry into self-employment (Barrett et al., 1996), the setting for this paper is a general one in which entry into self-employment is from both the ranks of the unemployed and employees.

There are several studies which have examined, in a multi-variate setting, the influence of ethnicity on the likelihood of being self-employed and the evidence from such studies suggests that ethnicity *per se* was not an important determinant of being

self-employed (Storey, 1994). At the same time, the more qualitative literature has cast the high Asian, and the low black Caribbean propensity to be self-employed in cultural terms. For example, Patel (1991) sees Asian self-employment as representing heritage cultures which stress self-sufficiency, thrift and hard work while Kazuka (1990) ascribes the lack of black businessmen to lack of communal identity, self-motivation and confidence.¹⁰

Many of the issues discussed in this paper have been the subject of academic scrutiny in the U.S.A. Jargowsky (1997) has highlighted the structural shifts that have occurred in the U.S. economy that have, in particular, badly affected the “trust-belt” states of the Midwest states and points to the limited job opportunities (as does Wilson, 1996) in the inner-city areas of these regions. Bates (1993) argued that a black business community is emerging in the U.S.A. and that minority employers offer the best prospects for solving the problems associated with low employment in inner-cities. The development of a black middle-class was also amplified by Frazier (1997). A particular interesting example of the relationship between culture and business was provided by Kraybill et al. (1995) who argued that the move, within a single generation, of the Amish people of Pennsylvania from farming to business ownership had profound implications for their way of life (and their view of the world) with which they had to cope.

Against this general background, this paper visits the area of ethnicity and self-employment by estimating a logit model on a large set of micro-data and then uses these estimates, in conjunction with a decomposition methodology which is developed and presented in subsequent sections, to answer the “ethnicity” versus “attributes” question posed earlier. The analysis is based upon data from the Sample of Anonymised Records (SARs) of the 1991 Census for Britain. This sample, which was made available to academics in 1994, contains the full range of census information for over 1.1 million persons. The restrictions adopted by this study yielded a sample of over 85,000 men. Section 2 describes the salient features of self-employment, drawing upon data from the 1991 Census. Section 3 sets out the theoretical and empirical framework within which

the issue was analysed. Section 4 discusses the econometric estimates. Section 5 compares the self-employment participation of Indians and black Caribbeans with that of the white "control" group while section 6 examines the extent to which self-employment offers a route out of joblessness. Section 7 then concludes the paper.

2. Ethnic minorities and self-employment

It is now well established that the labour market experiences in Britain of ethnic minority groups are different from that of white persons (Brown, 1984; Jones, 1993; Owen, 1997; Modood, 1997). On their arrival in Britain, migrants from the New Commonwealth were generally offered poorly paid, low status, jobs and this feature has remained relatively unchanged in the subsequent decades. Further, the experience of their British-born children is also one of disadvantage. The different experiences of ethnic minorities and whites are a result of a variety of factors ranging from differences in demographic and family structures, geographical distribution, social background, wealth and the existence of discriminatory practices (Owen, 1997). But, whatever the reasons, the labour market experience of ethnic minorities is, and has been, characterised by high unemployment rates, low participation rates and low status employment.

One route out of economic and social disadvantage is self-employment. Self-employment offers independence and, moreover, success in self-employment depends largely upon one's abilities and efforts rather than upon the stereotypical attitudes of others towards minorities. Table I presents data on two measures of self-employment by ethnic group in Great Britain based on the 1991 Census of Population. These measures were, first, the percentage of all people in work who were self-employed and second, the percentage of all people in work who were self-employed and also employing others. The number of self-employed people employing others is seen as a useful indicator of small business creation or entrepreneurship within particular ethnic groups.

For ethnic minorities as a whole 15% of those in work were self-employed compared to 13% for the white population. A similar picture emerges

TABLE I
Self-employment by ethnic group in Great Britain, 1991

	Self-employed	Self-employed with employees
	——— (% of all in work) ———	
White	12.8	4.3
Ethnic minority groups	15.1	6.3
Black	6.7	1.6
Black Caribbean	6.0	1.3
Black African	8.1	2.3
Black other	8.2	2.1
South Asian	20.8	9.1
Indian	20.0	8.7
Pakistani	23.9	9.2
Bangladeshi	18.6	13.6
Chinese and other	16.2	7.8
Chinese	27.2	15.8
Other-Asian	9.8	4.3
Entire population	12.9	4.4

Source: 1991 Census of Population.

when the analysis is confined to those self-employed persons who also employ others, with ethnic minority groups more likely than their white counterparts to be involved in business ownership. Furthermore, there were marked differences between ethnic groups in the percentage of those in work who were self-employed (with or without employees), with black Caribbeans and black Africans displaying a much lower propensity to be in self-employment than Asians. However, even among Asians, the likelihood of being in self-employment varied considerably. For example, for the broader measure of self-employment, Chinese (27%) and Pakistanis (24%) had the highest rates of self-employment followed by Indians (20%) and Bangladeshis (19%). Interestingly, this pattern changes when the focus is on business ownership (i.e., self-employment with employees) with Bangladeshis having the highest rates of business ownership. These differences would tend to suggest that, as argued in the introduction, the propensity of individuals to be self-employed depends upon their ethnic background. Ethnicity can either be taken to reflect the innate ability of certain groups to exploit market opportunities based upon internal mechanisms of self-help (Soar, 1991), or as an indication of the

difficulties experienced by these groups in obtaining work as employees.

The SAR's data does not contain information either on the income or on the net worth of respondents and, in the context of this paper, this leaves open the possibility that ethnicity is a proxy for "affluence". If say, the ethnic groups that were most inclined to be self-employed were also among the most well-off, then the correlation between ethnicity and self-employment would be but a mask for a, more fundamental, relationship between income and self-employment. Although this argument may have some force in a U.S. context (Bates, 1998), it is not valid for Britain. Berthoud (1998), using the Department of Social Security's *Family Resources Survey*, showed that Pakistanis and Bangladeshis are easily the *poorest* groups in Britain: yet, as Table I shows, these groups have very high rates of self-employment. The earnings of Indians and Chinese, by contrast to those of Pakistanis and Bangladeshis, are on par with those of the white population: yet as Table I shows they had rates of self-employment which were far greater than those for white persons. Although earnings for Caribbean men (though not for women) were below those of their white equivalents, rates of self-employment among black Caribbeans were, as Table I shows, the lowest for all the ethnic groups and, indeed, much lower than those for (the much less well-off) Pakistanis and Bangladeshis.

In addition to ethnicity, the propensity to be self-employed also depends upon the individuals' attributes. The literature of small business owners and the self-employed suggest that social class and educational attainment are important influences upon the likelihood entering business (Curran, 1986; Meager, 1989; Burrows, 1991). There is also evidence that age and marital status influence the probability of being self-employed (Burrows, 1991). Finally, there have been a number of studies which have demonstrated that there are marked spatial variations in the process of business formation and rates of self-employment (Mason, 1991; Hart et al., 1993; Hart and Gudgin, 1994; Modood and Berthoud, 1997).

A range of individual attributes from the 1991 SARs which were regarded as relevant to the study of self-employment are shown in Table II for the three groups (of economically active men, aged

TABLE II
Sample statistics for economically active males, aged 21-65

	White	Black	Indian
Sample size:	80,768	1,912	2,595
Age (years):	40	39	38
% in economic status:			
Unemployed	11	18	11
Employee	75	74	68
Self-employed	14	8	21
% in Class:			
PMT	34	18	40
SKL	45	52	39
UNS	21	30	21
% with qualifications:			
Degree	12	4	17
Sub-degree	7	3	5
None	81	93	78
% with qualifications in subjects:			
Business studies related	30	33	31
Science related	54	48	65
Arts related	16	19	4
% Born in:			
Britain	93	44	12
Overseas	7	56	88
% living in:			
London	31	69	64
North	47	10	13
South	22	21	23
Household circumstances:			
% Owner-occupiers:	73	62	88
% Married	64	46	83
% living in households with dependent children	38	36	66
% living in households with other earners	62	59	67

Source: 1991 Census for Great Britain.

21-65 years and living in metropolitan areas of Britain) upon which this study focuses: whites (80,768 cases), black Caribbeans¹¹ (1,912 case) and Indians (2,595 cases). *The terms "whites", "blacks" and "Indians" refer, hereafter, to men, as defined above, from these groups.*

In addition to the core set of attributes, set out in the previous paragraph (class, education, age, marital status and area of residence), this paper examines the influence of other characteristics like housing tenure and the presence of other earners and of dependent children in the household (Hart

and Gudgin, 1994; Storey, 1994). Lastly, the country of birth of the individuals was included in the study in order to examine the influence of the degree of assimilation of ethnic groups into British society on entry into self-employment.

From Table II it is clear that there are some striking differences between the attributes of the ethnic groups in the sample. Blacks compared to whites were more likely to be: unskilled, have no qualifications, been born overseas, live in metropolitan areas of southern Britain; and were less likely to be: married and own their own homes. Indians, on the other hand, possessed a broadly similar class profile and level of qualifications compared to whites although there were other important differences between these two groups. Indians were more likely than whites to: have science-based qualifications; have been born overseas; own their own homes; be married with dependent children; and live in households where other earners were present. Table II also shows important differences between the attributes of blacks and Indians. Compared to Indians, blacks were more likely to: be unskilled; have no post-18 qualifications; have been born in Britain; live in rented accommodation; be unmarried; and live in households without any earners.

3. An econometric model for choice of employment-type

3.1. The analytical framework

An economically active person may obtain income through being in one of three possible labour market states: unemployment; employment as an employee; or self-employment.¹² As a unemployed person or as an employee, he¹³ would receive, respectively, £ v or £ w per week ($w > v$) with certainty and, as a self-employed person, he would receive £ r with probability π ($0 \leq \pi \leq 1$) and £ s with probability $1 - \pi$, where $r > s$. If $u(\cdot)$ represents his utility function, with income as its argument, then his expected utility from self-employment, denoted Γ , is given by:

$$\Gamma = \pi u(r) + (1 - \pi)u(s). \quad (1)$$

With risk-aversion, if the expected value of the gamble, $\pi r + (1 - \pi)s$, is equal to w , then $u(w) > \Gamma$ and if it is equal to v , then $u(v) > \Gamma$.

Indeed, there exist values of π , π^E and π^U , such that:

$$\Gamma = \pi^E u(r) + (1 - \pi^E)u(s) = u(w), \quad (2a)$$

$$\Gamma = \pi^U u(r) + (1 - \pi^U)u(s) = u(v), \quad (2b)$$

implying that if $\pi = \pi^E$ he would be indifferent between being self-employed and being an employee and that if $\pi = \pi^U$ he would be indifferent between being self-employed and being unemployed. For $\pi > \pi^E$, he would choose self-employment over being an employee and for $\pi < \pi^E$, he would prefer to be an employee. The value of π^E , therefore, measures his degree of risk-aversion between self-employment and employee-employment. The implication of this analysis that self-employment would become more attractive for a fall in w , or a rise in π or r . A similar argument can be constructed for the choice between unemployment and self-employment: a person would choose to be self-employed, rather than being unemployed, if $\pi > \pi^U$ with the value of π^U representing his degree of risk-aversion between self-employment and unemployment. The degrees of risk-aversion, the probability of the venture succeeding (π) and the pay-offs (r and s) would depend upon whether the person was entering self-employment from unemployment or from employment as an employee.

The influence of ethnicity, on the decision to enter or not enter self-employment, may be introduced into the model by arguing that the degrees of risk aversion (that is, the values of π^E and π^U) vary according to a person's ethnic back-ground. In particular, one reason why, among whites, blacks and Indians, Indians have the highest, and blacks the lowest, representation among the self-employed, may be that $\pi_i^E < \pi_b^E$ and $\pi_i^U < \pi_b^U$ or, in other words, the degree of risk-aversion of Indians for self-employment is lower than that of blacks. It may also be that the difference in the degree of risk-aversion towards self-employment, between Indians and blacks, is greater for employees than for the unemployed so that, compared to blacks, relatively more Indians enter self-employment from employee-employment than from unemployment.

The influence of a person's (non-ethnic) attributes may be introduced into the model by observing that both r (the income from self-

employment if the venture is successful) and π (the probability of it being successful) can be regarded as functions, $r(\mathbf{x})$ and $\pi(\mathbf{x})$, of a vector, $\mathbf{x}$, of personal attributes. Under this refinement, the return to self-employment, and the probability of obtaining it, are not exogenous to a person but, instead, depend upon his attributes. This would imply that persons who had "self-employment friendly" attributes would be more likely to be self-employed than those who did not have such attributes.

3.2. The multinomial logit model

Suppose that there are J mutually exclusive, and collectively exhaustive, outcomes, indexed $j = 0, \dots, J$, of a particular event, relating to each individual i ($i = 1, \dots, N$) in the sample. Suppose Y_i is an integer variable such that event j occurs for individual i if, and only if, $Y_i = j$. It outcome $j = 0$ is taken as the baseline outcome then suppose that, for each individual i ($i = 1, \dots, N$), the "log odds ratio" of outcome $j = 1 \dots J$, relative to outcome 0, can be written as a linear function of K determining variables, whose values, for individual i , are X_{ik} , $k = 1, \dots, K$. This yields:

$$\log \left(\frac{\text{Prob}(Y_i = j)}{\text{Prob}(Y_i = 0)} \right) = \log \left(\frac{p_{ij}}{p_{i0}} \right) \quad (3)$$

$$= \sum_{k=1}^K \beta_{jk} X_{ik} = Z_{ij}, \quad (j = 1, \dots, J)$$

where: $p_{ij} = \text{Prob}(Y_i = j)$, $\sum_{j=0}^J p_{ij} = 1$ and the β_{jk} ($j = 1, \dots, J$; $k = 1, \dots, K$) are the coefficients associated with the j th (> 0) outcome and the k th determining variable, it being assumed that these coefficients do not vary across the individuals. By definition, from equation (3), $\beta_{0k} = 0$ ($k = 1, \dots, K$). Also from equation (3):

$$p_{ij} = \exp(Z_{ij})p_{i0}, \quad j = 1, \dots, J. \quad (4)$$

However:

$$p_{i0} = 1 - \sum_{r=1}^J p_{ir} = 1 - p_{i0} \sum_{r=1}^J \exp(Z_{ir})$$

$$= 1 / \left(1 + \sum_{r=1}^J \exp(Z_{ir}) \right). \quad (5)$$

Substituting the expression for p_{i0} from equation (5) into equation (4) yields:

$$p_{ij} = \exp(Z_{ij}) / \left(1 + \sum_{r=1}^J \exp(Z_{ir}) \right), \quad j = 1, \dots, J. \quad (6)$$

The problem with interpreting the coefficient estimates from the multinomial logit equation (3) is that, for example, $\beta_{jk} > 0$ does not imply that an increase in the value of variable k will lead to a rise in p_{ij} , the probability of outcome j for person i . It could be that the value of some other outcome increases even more, so that p_{ij} actually falls. The correct interpretation is that a positive/negative coefficient on a variable implies that the *odds-ratio* (the *ratio* of the probability of outcome j , to the probability of the chosen base outcome) increases/decreases with an increase in the value of the associated variable.

3.3. Estimating the multinomial logit model

Equation (3) was estimated on data from the SARs of the 1991 Census for Great Britain for economically active white, black and Indian men, between 21 and 65 years of age, living in metropolitan areas of Britain. This yielded a total of 85,275 men of whom 80,768 were white, 1,912 were black and 2,595 were Indian.

The dependent variable for estimating equation (3) was Y_i where:

- $Y_i = 0$ if the person was unemployed.
- $Y_i = 1$ if the person was an employee.
- $Y_i = 2$ if the person was a self-employed.

The determining variables used in the equation, in the light of the discussion of the previous section, were:

Age¹⁴

- AGE in years: normalised by setting AGE = 0 for persons who were 21 years old.

Education¹⁵

- HED = 1, if the person had degree-level qualification: HED = 0, otherwise.
- MED = 1, if the person had post-A level, but less than degree, qualifications; MED = 0, otherwise.

Area of study¹⁶

- SCI = 1, if area was science related: SCI = 0, otherwise.

- BUS = 1, if area was business-studies related; BUS = 0, otherwise.

Ethnicity¹⁷

- WHT = 1, if the person was white; WHT = 0, otherwise.
- BLK = 1, if the person's ethnicity was black Caribbean; BLK = 0, otherwise.
- IND = 1, if the person's ethnicity was Indian; IND = 0, otherwise.

Occupational class¹⁸

- PMT = 1, if the person was employed in a professional, managerial or technical capacity; PMT = 0, otherwise.
- SKL = 1, if the person was employed in a skilled/semi-skilled occupation: SKL = 0, otherwise.

Country of birth

- OVB = 1, if the person was born outside Britain; OVB = 0, otherwise.

Area of residence¹⁹

- STH = 1, if living in metropolitan areas of the south²⁰ (excluding London); STH = 0, otherwise.
- NTH = 1, if living in metropolitan areas of the north;²¹ NTH = 0, otherwise.

Marital status; the presence of children and of other earners

- MAR = 1, if the person was married; MAR = 0, otherwise.²²
- CHD = 1, if the person's household contained dependent children; CHD = 0, otherwise.
- ERN = 1, if the person's household contained earners (excluding the head of household); ERN = 0, otherwise.

Housing tenure

- OWN = 1, if the person was an owner-occupier; OWN = 0, otherwise.²³

On the basis of these variables the two equation (for $j = 1, 2$) that were estimated were:²⁴

$$\log \left(\frac{\text{Prob}(Y_i = j)}{\text{Prob}(Y_i = 0)} \right) = \log \left(\frac{p_{ij}}{p_{i0}} \right)$$

$$= \alpha_0 \text{WHT}_i + \beta_0 * \text{BLK}_i + \gamma_0 * \text{IND}_i \\ + \alpha_1 * \text{WHT}_i * \text{AGE}_i + \beta_1 * \text{BLK}_i * \text{AGE}_i \\ + \gamma_1 * \text{IND}_i * \text{AGE}_i + \alpha_2 * \text{WHT}_i * \text{AGE}_i^2 \\ + \beta_2 * \text{BLK}_i * \text{AGE}_i^2 + \gamma_2 * \text{IND}_i * \text{AGE}_i^2$$

$$+ \alpha_3 * \text{WHT}_i * \text{OVB}_i + \beta_3 * \text{BLK}_i * \text{OVB}_i \\ + \gamma_3 * \text{IND}_i * \text{OVB}_i + \alpha_4 * \text{WHT}_i * \text{HED}_i \\ + \beta_4 * \text{BLK}_i * \text{HED}_i + \gamma_4 * \text{IND}_i * \text{HED}_i \\ + \alpha_5 * \text{WHT}_i * \text{MED}_i + \beta_5 * \text{BLK}_i * \text{MED}_i \\ + \gamma_5 * \text{IND}_i * \text{MED}_i + \alpha_6 * \text{WHT}_i * \text{BUS}_i \\ + \beta_6 * \text{BLK}_i * \text{BUS}_i + \gamma_6 * \text{IND}_i * \text{BUS}_i \\ + \alpha_7 * \text{WHT}_i * \text{SCI}_i + \beta_7 * \text{BLK}_i * \text{SCI}_i \\ + \gamma_7 * \text{IND}_i * \text{SCI}_i + \alpha_8 * \text{WHT}_i * \text{PMT}_i \\ + \beta_8 * \text{BLK}_i * \text{PMT}_i + \gamma_8 * \text{IND}_i * \text{PMT}_i \\ + \alpha_9 * \text{WHT}_i * \text{SKL}_i + \beta_9 * \text{BLK}_i * \text{SKL}_i \\ + \gamma_9 * \text{IND}_i * \text{SKL}_i + \alpha_{10} * \text{WHT}_i * \text{NTH}_i \\ + \beta_{10} * \text{BLK}_i * \text{NTH}_i + \gamma_{10} * \text{IND}_i * \text{NTH}_i \\ + \alpha_{11} * \text{WHT}_i * \text{STH}_i + \beta_{11} * \text{BLK}_i * \text{STH}_i \\ + \gamma_{11} * \text{IND}_i * \text{STH}_i + \alpha_{12} * \text{WHT}_i * \text{MAR}_i \\ + \beta_{12} * \text{BLK}_i * \text{MAR}_i + \gamma_{12} * \text{IND}_i * \text{MAR}_i \\ + \alpha_{13} * \text{WHT}_i * \text{CHD}_i + \beta_{13} * \text{BLK}_i * \text{CHD}_i \\ + \gamma_{13} * \text{IND}_i * \text{CHD}_i + \alpha_{14} * \text{WHT}_i * \text{ERN}_i \\ + \beta_{14} * \text{BLK}_i * \text{ERN}_i + \gamma_{14} * \text{IND}_i * \text{ERN}_i \\ + \alpha_{15} * \text{WHT}_i * \text{OWN}_i + \beta_{15} * \text{BLK}_i * \text{OWN}_i \\ + \gamma_{15} * \text{IND}_i * \text{OWN}_i \quad (7)$$

In equation (7), the α_k the β_k , and the γ_k are, respectively, the "white", "black" and "Indian" coefficients. From equation (7), the log odds-ratio, $\log[p_{i2}/(1 - p_{i0})]$, of being self-employed (relative to being unemployed), for the "reference person"²⁵ who happened to be white (WHT = 1) is α_0 . If such a person were, instead, black or Indian then his log odds-ratio would be respectively β_0 and γ_0 . If, say, $\beta_0 < \alpha_0$, then the probability of being self-employed would be higher for a white person (as defined above) than for an equivalent black person. The magnitude of the coefficients. α_0 , β_0 and γ_0 are a first pass at measuring the degree of "ethnic (dis)advantage", experienced by whites, blacks and Indians, relative to each other.

The second pass is provided by the interaction terms in equation (7), involving the ethnic variables WHT, BLK and IND. These terms allow the degree of ethnic (dis)advantage to vary with the *non-ethnic* attributes of a person. For example, in equation (7), if $\alpha_3 < 0$, then the odds-ratio of self-employment would, *ceteris paribus*, be higher for a British-born, than for an overseas-born, white person and if $\beta_3 < \alpha_3$, then *within the class of overseas-born persons*, blacks would face a greater degree of disadvantage than whites²⁶ and this could be different from the disadvantage faced by British-born blacks, relative to British-born whites. Similarly, in equation (7), if $\alpha_4, \gamma_4 > 0$ but

$\gamma_4 < \alpha_4$ then, *ceteris paribus*, the odds-ratio of being self-employed would be higher for a white person with a degree than for a white person without a degree and also for an Indian with a degree than for an Indian without a degree and *within the class of persons with degrees*, it would be lower for Indians than for equivalent white persons.

Therefore, the *full* extent of ethnic (dis)advantage in self-employment is represented by the "ethnic" intercept terms, α_0 , β_0 and γ_0 , (which denote a "generalised" ethnic (dis)advantage) in conjunction with the "ethnic" slope coefficients, α_k , β_k and γ_k ($k = 1, \dots, 15$), which denote the ethnic (dis)advantage *specific* to the variable to which the slope coefficient is attached. The question, of course, is one of assigning reasons for this ethnic (dis)advantage. One interpretation is that the existence of social and family networks within some communities, but not in others, might confer a relative advantage. The degree of advantage would depend upon the degree of cohesion within the community: the closer members of a community feel to each other, tied by bonds of common culture and language, the more likely they are to exploit these networks.²⁷ The network advantage is also likely to be cumulative and, thereby, lead to a virtuous circle: the more widespread self-employment is within a particular group, the more extensive such networks are likely to be. Indeed, it may require a critical mass of self-employed persons within a community for networks to exist on a meaningful scale.

But other interpretations are also possible. The taste that some groups have for self-employment may have less to do with networks but more to do with their treatment in the world of *paid employment*. If this treatment differs across ethnic groups, then some groups may be pushed into self-employment while members of other groups are content to remain employees. Borooah (1999), after a studying the occupational attainments of white, black Caribbean and Indian *full-time employees* in Britain, concluded that such ethnic barriers to occupational mobility, that black and Indian employees faced, were being rapidly eroded and that, for full-time employees, occupational inequality was increasingly becoming a matter of *wht*, rather than *who* you were. Based on this evidence, this paper would, in explaining ethnic

(dis)advantage in self-employment, place less importance to the "pushed from paid employment" interpretation compared to "family and social networks" interpretation.²⁸

4. Estimation and inference results

Table III shows the results of estimating equation (7) on the sample of 85,275 men whose characteristics were defined in the previous section.²⁹ The equations were estimated first without any restrictions imposed upon their coefficients and then with some of their coefficients constrained to be zero. These coefficients were, individually and collectively, not significantly different from zero. In the context of these restrictions, 40 of the 96 coefficients in equation (7) were constrained to be zero and a likelihood-ratio test, with a $\chi^2(40) = 43.0$ did not reject the validity of these restrictions. It is the restricted estimates that are shown in Table III with the variables that were dropped being identified.

The χ^2 value at the head of the tables (80191.95) is defined as $2(L_1 - L_0)$ where L_0 is the value of the log-likelihood function when the only explanatory variable was the constant term and L_1 is the value of the log-likelihood function when all the explanatory variables were included: the degrees of freedom equal the number of slope coefficients estimated. These χ^2 values decisively reject the null hypothesis that the model did not have greater explanatory power than a "constant term only" model. The value of L_1 is the log-likelihood value shown at the head of the table. The "pseudo- R^2 " is defined as $1 - L_1/L_0$. This is bounded from below by 0 and, from above, by 1: a 0 value corresponds to all the slope coefficients being zero and a value of 1 corresponds to perfect prediction.³⁰

The coefficients on the variables included in the equation, shown in Table III, were all significantly different from zero. With the focus on self-employment, the variables shown in this Table can be classified into three groups. First, there were variables that affected men from *all* three groups – white, black and Indian – in terms of their odds-ratio of being self-employed. There were three such variables: age, with the odds-ratio of being self-employed increasing (but at a decreasing rate) with age; occupational class, with the odds-ratio

TABLE III
Multinomial logit regressions.

The probabilities of being an employee and of being self-employed relative to the probability of being unemployed

Multinomial regression				Number of obs. = 85275		
Log Likelihood = -83588.187				$\chi^2 = 80191.95$		
				prob > $\chi^2 = 0.0000$		
				Pseudo $R^2 = 0.4280$		
y	Coefficient	Std. error	z	P > z	[95% confidence interval]	
Employee						
wht	-0.2002447	0.0436677	-4.586	0.000	-0.2858318	-0.1146576
blk	-0.4340374	0.1682966	-2.579	0.010	-0.7638926	-0.1041822
ind	(dropped)					
wovs	-0.2158131	0.0330565	-6.529	0.000	-0.2806026	-0.1510237
bovs	(dropped)					
iovs	(dropped)					
wnth	-0.1803268	0.0307272	-5.869	0.000	-0.240551	-0.1201027
bnth	(dropped)					
inth	(dropped)					
wth	-0.1485959	0.0361294	-4.113	0.000	-0.2194082	-0.0777837
bsth	(dropped)					
isth	(dropped)					
wage	0.0420865	0.0039812	10.571	0.000	0.0342836	0.0498894
bage	0.0620348	0.0213145	2.910	0.004	0.0202591	0.1038105
iage	0.0912275	0.012131	7.520	0.000	0.0674511	0.1150038
wage2	-0.0008783	0.0000924	-9.508	0.000	-0.0010593	-0.0006972
bage2	-0.0010996	0.0005132	-2.143	0.032	-0.0021055	-0.0000937
iage2	-0.0021203	0.0003693	-5.742	0.000	-0.002844	-0.0013965
wpmt	0.7782649	0.0395128	19.697	0.000	0.7008212	0.8557087
bpmt	0.7135958	0.2070164	3.447	0.001	0.3078511	1.11934
ipmt	0.3734409	0.1512098	2.470	0.014	0.0770751	0.6698066
wskl	0.2649131	0.029319	9.036	0.000	0.2074489	0.3233773
bskl	(dropped)					
iskl	(dropped)					
whed	(dropped)					
bhed	(dropped)					
ihed	(dropped)					
wmed	(dropped)					
bmed	(dropped)					
imed	(dropped)					
wbus	0.6568976	0.079505	8.262	0.000	0.5010708	0.8127245
bbus	(dropped)					
ibus	(dropped)					
wsci	0.8782645	0.0680223	12.911	0.000	0.7449432	1.011586
bsci	1.278772	0.4463251	2.865	0.004	0.4039907	2.153553
isci	(dropped)					
wmar	0.2003528	0.027188	7.369	0.000	0.1470654	0.2536403
bmar	(dropped)					
imar	(dropped)					
wch	(dropped)					
bch	(dropped)					
ich	(dropped)					
wown	0.8255858	0.0267278	30.889	0.000	0.7732004	0.8779713
bown	0.4847188	0.1374386	3.527	0.000	0.2153442	0.7540935
iown	(dropped)					
wearn	2.338523	0.0319597	73.171	0.000	2.275883	2.401163
bearn	2.226408	0.1586697	14.032	0.000	1.915421	2.537395
iearn	2.344241	0.150713	15.554	0.000	2.048848	2.639633

TABLE III (Continued)

y	Coefficient	Std. error	z	P > z	[95% confidence interval]	
Self-employee						
wht	-3.11946	0.0623544	-50.028	0.000	-3.241672	-2.997248
blk	-5.164034	0.4419257	-11.685	0.000	-6.030192	-4.297875
ind	-3.879095	0.2873462	-13.500	0.000	-4.442283	-3.315907
wovs	(dropped)					
bovs	(dropped)					
iovs	(dropped)					
wnth	-0.590119	0.0365437	-16.148	0.000	-0.6617433	-0.5184947
bnth	(dropped)					
inth	(dropped)					
wsth	-0.5598819	0.0435321	-12.861	0.000	-0.6452032	-0.4745605
bsth	(dropped)					
isth	(dropped)					
wage	0.1059436	0.1152199	20.296	0.000	0.0957128	0.1161744
bage	0.2228112	0.0375588	5.932	0.000	0.1491973	0.2964251
iage	0.1306258	0.0239442	5.455	0.000	0.0836961	0.1775556
bage2	-0.0019594	0.0001204	-16.273	0.000	-0.0021954	-0.0017234
wage2	-0.0047722	0.0009031	-5.284	0.000	-0.0065422	-0.0030022
iage2	-0.0028353	0.0006018	-4.711	0.000	-0.0040148	-0.0016558
wpmt	1.094679	0.0517743	21.143	0.000	0.9932037	1.196155
bpmt	2.114062	0.3900317	5.420	0.000	1.349614	2.87851
ipmt	2.958575	0.2526276	11.711	0.000	2.463434	3.453716
wskl	0.9879009	0.414581	23.829	0.000	0.9066445	1.069157
bskl	1.563175	0.3038323	5.145	0.000	0.9676749	2.158676
iskl	1.416493	0.2130173	6.650	0.000	0.9989866	1.833999
whed	0.2057426	0.0613237	3.355	0.001	0.0855505	0.3259348
bhed	(dropped)					
ihed	-0.6015058	0.1404822	-4.282	0.000	-0.8768457	-0.3261658
wmed	-0.325985	0.0789719	-4.128	0.000	-0.4807672	-0.1712029
bmed	(dropped)					
imed	-1.231166	0.2642819	-4.659	0.000	-1.749149	-0.7131835
wbus	0.4193399	0.1046061	4.009	0.000	0.2143156	0.6243641
bbus	(dropped)					
ibus	(dropped)					
wsci	0.4067587	0.0952948	4.268	0.000	0.2199844	0.593533
bsci	(dropped)					
isci	(dropped)					
wmar	0.1598447	0.0373615	4.278	0.000	0.0866175	0.2330719
bmar	(dropped)					
imar	0.39308	0.193156	2.035	0.042	0.0145011	0.7716588
wch	0.2568551	0.0254925	10.076	0.000	0.2068908	0.3068194
bch	(dropped)					
ich	0.575554	0.1319587	4.362	0.000	0.3169196	0.8341884
wown	1.298945	0.0363693	36.715	0.000	1.227663	1.370228
bown	0.8057658	0.2343264	3.439	0.001	3.464944	1.265037
iown	(dropped)					
wearn	2.176127	0.0374804	-58.060	0.000	2.102667	2.249587
bearn	2.022765	0.2342212	8.636	0.000	1.5637	2.584513
iearn	2.235977	0.1778274	12.574	0.000	1.887442	2.584513

(Outcome y = unemployed is the comparison group).

Mlogit : likelihood - ratio test $\chi^2 (40) = 42.95$
for zero restrictions Prob > $\chi^2 = 0.3461$

of being self-employed being higher for men in the professional/managerial/technical and the skilled manual/non-manual classes than for unskilled men; and the presence of other earners in the household, with the odds-ratio of being self-employed being greater if there were other earners in the household.

Second, there were variables that exerted a significant influence on the decisions of whites and Indians, but not of blacks, to enter self-employment. There were three such variables: degree-level qualifications, with whites and Indians who had such qualifications being, respectively, *more* likely and *less* likely to be self-employed than their counterparts who were not so qualified; post-18, sub-degree qualifications, with both whites and Indians who held such qualifications being *less* likely to be self-employed; and marriage and the presence of dependent children in the household, with both whites and Indians, under these circumstances, being *more* likely to be self-employed.

Lastly, there were variables that only affected the self-employment decisions of whites. These were: area of residence in Britain; home-ownership; and subject area in which educational qualifications were obtained. White males who lived in London, or who were owner-occupiers, or who had business-studies or science-related qualifications, were *more* likely to be self-employed than white males without these attributes.

5. Separating ethnic from attribute effects

5.1. The ethnic propensity for self-employment

The results from the model can be made more transparent by calculating the probabilities of the different outcomes in a variety of hypothetical situations. Suppose, *ceteris paribus*, that all the persons in the sample were white so that $IND_i = BLK_i = 0$ for all $i = 1, \dots, N$. Let p_i^W denote the probability of person i being self-employed in this hypothetical situation. Now suppose, *ceteris paribus*, that all the persons in the sample were black³¹ so that $BLK_i = 1$ for all $i = 1, \dots, N$ and let p_i^B denote the probability of person i being self-employed under these hypothetical circumstances. Note that, because of the specification of equation (7), the "ethnic" probabilities of being self-

employed,³² p_i^W and p_i^B , are the result of *all* the individuals in the sample having their attributes evaluated at, respectively, "white" (α_k) and "black" (β_k) coefficients: these coefficients are applied to equation (6) to obtain the probabilities, p_i^W and p_i^B .

Denote by $p^W = \sum_{i=1}^N p_i^W/N$ and $p^B = \sum_{i=1}^N p_i^B/N$ the respective averages of the ethnic probabilities. Then p^W and p^B are the average ethnic probabilities for whites and blacks of being self-employed and a measure of the (black) *ethnic (dis)inclination* towards self-employment is $1 - \lambda^B$ where:

$$\lambda^B = p^B/p^W. \quad (8)$$

If the two probabilities are equal, then $\lambda^B = 1$ and blacks are not inclined or disinclined towards self-employment, *relative to whites*. However, if $p^N < p^W$, then $\lambda^B < 1$, and blacks are relatively *disinclined* towards self-employment, the degree of disinclination, $1 - \lambda^B$, being greater the further λ^B is from 1. On the other hand, if $p^B > p^W$, then $\lambda^B > 1$ blacks are relatively *inclined* towards self-employment.

5.2. Attributes (dis)advantage in self-employment

Differences between the ethnic probabilities of self-employment, p^W and p^B are entirely the result of *different* sets of coefficients (the α_k and the β_k) being applied to a *given* set of attributes (that of the persons in the sample). These differences may, therefore, be attributed purely to differences in ethnicity. However, the proportions of blacks and whites *in the sample* who are self-employed, respectively denoted s^B and s^W , will, in general, be different from the ethnic probabilities, p^B and p^W . This reflects the fact that blacks and whites differ not just in terms of ethnicity but also in terms of their attributes. In other words, black persons could be both (dis)inclined towards self-employment and be (dis)advantaged in terms of the attributes favourable for self-employment. The *observed (dis)inclination* of black persons towards self-employment (which, as shown below, is the product of ethnic (dis)inclination and attribute (dis)advantage) is $1 - \mu^B$, where:

$$\mu = s^B/s^W. \quad (9)$$

If $\mu^B = 1$, then the proportions, in the sample, of

blacks and whites who are in self-employment are the same and blacks are observed to be neither more nor less inclined towards self-employment than whites. However, if $\mu^B < 1$ then blacks, in the sample, are less inclined towards self-employment than whites. Equation (9) can be decomposed as follows:

$$\mu^B = \frac{s^B}{s^W} = \left[\frac{p^B}{p^W} \right] \left[\frac{s^B}{p^B} \right] \left[\frac{p^W}{s^W} \right] = \lambda^B \frac{\pi^B}{\pi^W} = \lambda^B \delta^B \quad (10)$$

where: $\pi^B = s^B/p^B$ and $\pi^W = s^W/p^W$ are, respectively, for blacks and whites, the ratio of sample proportions to average ethnic probabilities and $1 - \delta^B$ is a measure of the attribute (dis)advantage faced by blacks where: $\delta^B = \pi^B/\pi^W = \mu^B/\lambda^B$. The quantity δ^B compares the ratio of the sample proportion of blacks in self-employment to the ethnic probability of blacks being self-employed, s^B/p^B , with the corresponding ratio, s^W/p^W , for whites: if the former is less/greater than the latter, then blacks suffer/enjoy an attribute disadvantage/advantage in self-employment.

To put it differently, if $\delta^B = 1$, then, in terms of self-employment, blacks do not face advantage or disadvantage since $\mu^B = \lambda^B$: the ratio of the black and white sample proportions is equal to the corresponding ratio of the black and white sample proportions is equal to the corresponding ratio of the ethnic probabilities and if this latter ratio is less than 1, then it is entirely due to the identical attributes of blacks and whites being evaluated more favourably, in terms of inclination towards self-employment, for the latter than for the former. However, if $\delta^B < 1$ (or equivalently, $\mu^B < \lambda^B$) then blacks are further deterred from entering self-employment because, relative to whites, they do not have the appropriate attributes. Lastly, if $\delta^B > 1$, then blacks enjoy an advantage since then $\mu^B > \lambda^B$: any ethnic inclination or disinclination that blacks may have towards self-employment is amplified or dampened, as the case may be, by the fact that, relative to whites, their attributes are suited for self-employment.

From equation (10) it follows that:

$$\begin{aligned} (1 - \mu^B) &= (1 - \lambda^B) + (1 - \delta^B) - [(1 - \lambda^B)(1 - \delta^B)] \\ &= (1 - \lambda^B) + (1 - \delta^B) - \Phi^B. \end{aligned} \quad (11)$$

so that the degree of observed (dis)inclination towards self-employment is the sum of the degrees of ethnic (dis)inclination and attribute (dis)advantage *less* an interaction term, Φ^B , which is the product of the latter two terms. If, in turn, the interaction term is decomposed as:

$$\Phi^B = \Phi^B \left(\frac{1 - \lambda^B}{\Omega^B} \right) + \Phi^B \left(\frac{1 - \delta^B}{\Omega^B} \right), \quad (12)$$

where $\Omega^B = (1 - \lambda^B) + (1 - \delta^B)$, then equation (11) may be rewritten as:

$$\begin{aligned} (1 - \mu^B) &= (1 - \lambda^B) \left(1 - \frac{\Phi^B}{\Omega^B} \right) \\ &\quad + (1 - \delta^B) \left(1 - \frac{\Phi^B}{\Omega^B} \right). \end{aligned} \quad (13)$$

The first term in equation (13) represents the contribution of ethnic (dis)inclination to the observed degree of (dis)inclination. This contribution has two parts. The first part is the "gross" contribution, represented by the term $(1 - \lambda^B)$, and the second part is the contribution, represented by term $(1 - \lambda^B)(\Phi^B/\Omega^B)$, of ethnic (dis)inclination to the interaction term. Subtracting the second contribution from the first yields the "net" contribution. The second term in equation (13) represents the contribution of attribute (dis)advantage to the observed degree of (dis)inclination. This contribution also has two parts. The first part is the "gross" contribution, represented by the term $(1 - \delta^B)$, and the second part is the contribution, represented by the term $(1 - \delta^B)(\Phi^B/\Omega^B)$, of attribute (dis)advantage to the interaction term. Subtracting the second contribution from the first yields the "net" contribution.

The preceding paragraphs defined black and Indian (dis)inclination towards, and (dis)advantage in, self-employment by comparing each group with the white "control" group. However, using the above methodology, it is also possible to compare blacks and Indians directly. Black (dis)inclination towards self-employment, and black attribute (dis)advantage in self-employment, may be defined relative to Indians as:

$$\lambda_I^B = \frac{p^B}{p^I}, \quad \mu_I^B = \frac{s^B}{s^I} \quad \text{and} \quad \delta_I^B = \frac{\mu_I^B}{\lambda_I^B}. \quad (14)$$

5.3. Estimates of ethnic (dis)inclination and attribute (dis)advantage

Table IV shows the sample proportions of the different groups – whites, blacks and Indians – in self-employment and also the values of the ethnic probabilities of self-employment (as defined earlier) for each of the groups. Because the sample was predominantly white there was, for this group, hardly any difference between its sample proportion in, and its ethnic probability of being in, self-employment: nearly 14% of whites were in self-employment and, had the attributes of the entire sample been evaluated at “white” coefficients (that is, the α_k of equation (7)), this would not have changed appreciably. For blacks and Indians, however, the difference between the sample proportions and the ethnic propensities was more marked. Just under 8% of economically active blacks were self-employed but their ethnic probability of being self-employed was nearly 10%: the fact that the latter value exceeded the former suggested that, in terms of the attributes suitable for self-employment, blacks faced disadvantage. By contrast, 21% of Indians were self-employed and the fact that their ethnic probability, at 17%, was lower than this value suggested that, in terms of self-employment, Indians had an attributes advantage.

Table V translates the sample proportions and the ethnic probabilities, shown in Table IV, into estimates, for blacks and Indians, of their observed and ethnic (dis)inclination towards, and their attribute (dis)advantage in, self-employment. The estimated value of 1.25 for the ethnic inclination of Indians towards self-employment, shown in Table V, means that if Indians and whites had been assigned a common set of attributes (namely, the attributes of the sample as a whole) then the average probability of Indians being self-employed would have been 25% higher than the corresponding white probability. A similar exercise for blacks yielded a value of 0.69, implying that the average probability of blacks being self-employed, under the common set of sample attributes, would have been 31% lower than the corresponding white probability.

However, the fact that Indians and blacks, as separate groups, had attributes that were different from those of the sample, considered in its entirety, meant that the proportions of Indians and blacks in the sample who were self-employed, were, respectively, 56% higher, and 42% lower, than the corresponding white proportion. This rise for Indians from the ethnically determined ratio, $\lambda' = p'/p^w = 1.25$ to the sample ratio, $\mu' = s'/s^w = 1.56$, and the corresponding fall for blacks from

TABLE IV

Sample proportions and synthetic probabilities by economic status for economically active white, black Caribbean and Indian males, 21–65 years

	Unemployed		Employee		Self-employed	
	Sample: s_i	Ethnic: p_i	Sample: s_i	Ethnic: p_i	Sample: s_i	Ethnic: p_i
White	0.1079	0.1079	0.7565	0.7544	0.1356	0.1377
Black	0.1820	0.1401	0.7390	0.7645	0.0790	0.0954
Indian	0.1053	0.1272	0.6836	0.7005	0.2112	0.1722

TABLE V

Estimates of ethnic (dis)inclination and attribute (dis)advantage for economically active black Caribbean and Indian males, 21–65 years

	Ethnic inclination*	Attribute advantage*	Overall inclination*
Black/White	0.6932	0.8403	0.5825
Indian/White	1.2512	1.2449	1.5575
Black/Indian	0.5540	0.6750	0.3740

* Disinclination or disadvantage if value < 1.

the ethnically determined ratio, $\lambda^B = p^B/p^W = 0.69$, to the sample ratio, $\mu^B = s^B/s^W = 0.58$, could be ascribed to, respectively, Indian advantage, and black disadvantage, in terms of the attributes positively associated with self-employment. As Table V shows, with regard to self-employment, Indian men had an attributes *advantage* 24% (corresponding to $\delta^I = \mu^I/\lambda^I = 1.24$), but black men had an attributes *disadvantage* of 16% (corresponding to $\delta^B = \mu^B/\lambda^B = 0.84$), over their *white* counterpart. A direct comparison of the black and Indian men in the sample showed that, with regard to self-employment, blacks suffered an attributes disadvantage of nearly 33% (corresponding to $\delta_i^B = \mu_i^B/\lambda_i^B = 0.37/0.55 = 0.67$), relative to Indians.

Table IV shows the proportionate contributions of ethnic (dis)inclination and attribute (dis)advantage to observed (dis)inclination towards self-employment. These calculations were based on equation (13) and are shown, in the table, for: blacks relative to whites; Indian relative to whites; and blacks relative to Indians. For blacks versus whites, 66% of the overall disinclination of blacks towards self-employment (that is, $1 - \mu^B$) was due to ethnic disinclination and 34% to attribute disadvantage; for blacks versus Indians, 58% was due to ethnic disinclination and 42% was due to attribute disadvantage. Comparing Indians to whites, 51% of the overall inclination of Indians towards self-employment was due to ethnic inclination and 49% was due to attribute advantage.

TABLE VI

Percentage contributions of ethnic (dis)inclination and attribute (dis)advantage to observed (dis)inclination towards self-employment of economically active white, black Caribbean and Indian males, 21–65 years

	Ethnic (dis)inclination	Attribute (dis)advantage	Total
Black/White	66	34	100
Indian/White	51	49	100
Black/Indian	58	42	100

6. Self-employment as a route out of unemployment

A popular theme in the literature on ethnic minorities and self-employment has been the importance of promoting business ownership among ethnic

minorities in order to “avoid the perpetuation [in this country] of an economically dispossessed black population” (Scarman, 1986). Self-employment is, thus, seen as offering ethnic minorities a joblessness in situations where, due to the existence of cultural and social barriers, they cannot find jobs. Associated with such sentiments are two reasons for entering business. People may be “pushed” into self-employment through unemployment and blocked opportunities. Jones et al. (1992) argued that this was the reason for over a quarter of Asian businessmen entering self-employment. The second reason for entering self-employment is that people are “pulled” into self-employment attracted by the economic gains and financial independence that business ownership offers. Srinivasan (1995), for example, argued that nearly 80% of her Asian sample gave the desire to be their “own boss” as the reason for their entry into business and similar findings were reported by Blackburn (1994) for Bangladeshis.

As Table II showed, only 8% of blacks, but over one-fifth of Indians, in the sample were self-employed. Coincidentally, nearly one in five blacks was unemployed compared to just over one in ten Indians. This raises the question of the extent to which the black unemployment rate could be reduced if blacks became “more like Indians” and entered self-employment in larger numbers. Put differently, the question is whether the different rates of self-employment between blacks and Indians was due to differences in the degree of inclination of blacks and Indians towards self-employment or whether it was due to blacks being less well-endowed, relative to Indians, with the attributes that were positively associated with business entry.

Under the first scenario, the *same* set of attributes would, because of differences in their respective inclinations towards self-employment, lead to *different* rates of self-employment for blacks and Indians. Depending on the extent to which the self-employed were pushed or pulled into self-employment, this would have consequences for their respective unemployment rates. In econometric terms, even though the values of the explanatory variables in equation (7) might be the same for blacks and Indians, the fact that the β_k and the γ_k were different would lead to differences,

between the two groups, in p_i , the probability of being self-employed. Under the second scenario, even with $\beta^k = \gamma^k$, differences in the values of the explanatory variables would lead to differences between blacks and Indians in their respective probabilities of being self-employed and, again, the relative importance of push and pull factors would determine the consequences for black and Indian unemployment rates. In practice, the two scenarios are intimately entangled: differences in the representation of blacks and Indians in the ranks of the self-employed are due to both differences in their degree of inclination and in the nature of their attributes. These influences were sought to be disentangled by addressing the following questions:

(i) What would have been the proportion of Indians in self-employment if the attributes possessed by Indians had been evaluated, for the purposes of computing the probability of being self-employed, using the black (that is, the β_k) coefficients? How do these *synthetic* proportions (denoted $\hat{s}^I$) compare to the *actual* proportions of blacks and Indians who were self-employed (that is, s^B and s^I)? The values of these three proportions – s^B , $\hat{s}^I$ and s^I – are shown in Table V against, respectively, the rows labelled: s^B (actual); $\hat{s}^I$ (synthetic); and s^I (actual).

(ii) What would have been the proportion of blacks in self-employment if the attributes possessed by blacks had been evaluated, for the purposes of computing the probability of being self-employed, using the Indian (that is, the γ_k) coefficients? How do these *synthetic* proportions (denoted $\hat{s}^B$) compare to the *actual* proportions of blacks and Indians who were self-employed? The values of these three proportions – s^B , $\hat{s}^B$ and s^I – are also shown in Table V against, respectively,

the rows labelled: s^B (actual); $\hat{s}^B$ (synthetic); and s^I (actual).

Table VII shows that the proportion of blacks in self-employment would have risen by 5 percentage points (pp) if black attributes had been married to Indian coefficients. Of this rise, nearly half (2.4 pp) would have come from employee (the pull factor) and the remainder (2.6 pp) would have come from the ranks of the unemployed (the push factor). As a consequence, the black unemployment rate would fall from 18.2% to 15.6%. On the other hand, as Table VII shows, if Indian attributes had been wedded to black coefficients then the proportion of Indian in self-employment would fall from 21.1% to 9.7%, a fall of 11.4 pp. However, most of this fall would have been reflected in a rise of 10.7 pp in the proportion of Indians employed as employees and only 0.7 pp would have gone towards raising the Indian unemployment rate from 10.5% to 11.2%.

What these results suggest is that, in terms of attributes, Indians are as well suited for employment as employees as they are for self-employment. It is their ethnic inclination towards self-employment that *pulls* them in that direction. If, instead, they had possessed black disinclination towards self-employment, then Indian participation in business would be greatly reduced (from one in five to one in ten) but the overwhelming number of those Indians who, as a consequence, did not enter business would find jobs rather than becoming unemployed. *It is, therefore, pull rather than push factors that attract Indians into business.* For blacks the story is different. Even if they had had the inclination that Indians have for business, an absence of appropriate attributes would mean that black rates of self-employment would fall far short (12.9% compared to 21.1%)

TABLE VII
Actual and synthetic proportions of blacks and Indians in unemployment, employee employment and self-employment

	Unemployed	Employees	Self-employed
Blacks who are: (S^B actual)	0.182	0.739	0.079
Blacks who would have been: (S^B synthetic)	0.156	0.715	0.129
Indians who are: (S^I actual)	0.105	0.684	0.211
Indians who are: (S^I actual)	0.105	0.684	0.211
Indians who would have been: (S^I synthetic)	0.112	0.791	0.097
Blacks who are: (S^B actual)	0.182	0.739	0.079

of Indian rates. Of those blacks who did, under this scenario, enter business approximately half would be drawn from the ranks of the unemployed. *This suggests that, for blacks, push factors are at least as important as pull factors in determining business entry.*

The difference between the proportions of blacks and Indians in self-employment, $s^I - s^B$, can be decomposed as:

$$s^I - s^B = (\hat{s}^I - s^B) + (s^I - \hat{s}^I) = A + B, \quad (15a)$$

$$s^I - s^B = (s^I - \hat{s}^B) + (\hat{s}^B - s^B) = C + D. \quad (15b)$$

It equations (15a) and (15b), A and C represent that part of the "self-employment gap" between blacks and Indians that is due to inter-group differences in attributes: A is the part arising from the evaluation of Indian and black attributes using *black* coefficients and C is the part arising from the evaluation of Indian and black attributes using *Indian* coefficients. Similarly, B and D represent that part of the gap that is due to inter-group differences in inclinations towards self-employment: B is the part arising from the evaluation of *Indian* attributes at Indian and black coefficients and D is the part arising from the evaluation of *black* attributes at Indian and black coefficients.³³ In percentage terms, when black coefficients were used to evaluate the attributes only 14% of the self-employment gap between Indian and blacks was due to a difference in attributes and 86% was due to the fact that Indians had a greater inclination for self-employment;³⁴ when Indian coefficients were used to evaluate the attributes, 62% of the self-employment gap between Indians and blacks was due to a difference in attributes and 38% was due to the fact that Indians had a greater inclination for self-employment.³⁵

The reason for this disparity in the percentage contributions of attribute and inclination differences using black and Indian coefficients is that when black coefficients were used attributes that affected the decision of Indians, but not the decision of blacks, to enter self-employment (education level, marriage, the presence, in the household, of children and of other earners) were not called into play. Since, as Table II shows, it was with respect to these attributes that differences between Indians and blacks were greatest, the contribution of attribute differences to the self-

employment gap was low. However, when Indian coefficients were used, it was precisely these black attributes that entered the "Indian" equation and magnified the contribution of the attribute differences to the self-employment gap. If the mean values of A and C and of B and D are taken as the "true" contributions of, respectively, attribute and inclination differences then the conclusion of this section is that 38% of the self-employment gap between Indian and blacks was due the fact that Indians were better endowed with "self-employment friendly" attributes and 62% was due to the fact that Indians had a greater inclination towards self-employment than did blacks. These conclusions accord well with the conclusion of the previous section, arrived at through a different methodology, that ethnic disinclination and attribute disadvantage contributed respectively 58% and 42% to the observed disinclination of blacks, relative to that of Indians, to enter business.

7. Conclusions

The central question addressed in this paper is encapsulated in the question: why are so many Indians, but so few black Caribbeans, in Britain self-employed? Figures from the 1991 Census (Table II) showed that over 20% of economically active Indian males, but only 8% of economically active black Caribbean males, were self-employed. One reason why such disparities in self-employment rates between the two groups are a matter of some concern, is that self-employment is seen by many economic and social commentators (Scarman, 1986) as offering the black population a route out of their existing state of economic dispossession. The concern is that so few black males take this route.

The reluctance of black men to become self-employed was, as this study suggested, due to two factors. First, they were, relative to whites and Indians, "ethnically disinclined" to enter business – this stunted their *desire* to be self-employed. Second, they did not possess, relative to whites and Indians, the attributes that were positively related to entering business – this impaired their *ability* to be self-employed. The contribution of this paper was that, using data from the 1991 Census, it was able to pinpoint how much of the

observed paucity of self-employed black males was due to ethnic disinclination and how much was due to attribute disadvantage: 58% of the observed lack (relative to Indians) of self-employed black males was due to ethnic disinclination and 42% was due to attribute disadvantage.

These observations went some way to explaining why Indians embraced self-employment, but blacks did not. The corollary to these observations was the extent to which the economic position of blacks would have improved if, in terms of their attitudes towards self-employment, they had been "more like Indians". On this, the conclusions were pessimistic. The percentage of economically active black men who were self-employed would, under these conditions, rise from 8% to 13% (representing 38% of the sample self-employment gap between Indians and blacks). However, only half of these entrants into self-employment would be drawn from the unemployed and, as a consequence, the unemployment rate for blacks would fall from just over 18% to just under 16%.

The final question that this study addressed was the extent to which "push" and "pull" factors were responsible for entry into business. For Indians, it was largely "pull" factors that attracted them to self-employment. For the over-whelming majority of Indians who were self-employed, the alternative economic status was employee-employment and, if they had not been self-employed, only a small minority of self-employed Indian men would have been unemployed. For blacks, however, push and pull factors were responsible in equal measure for their entry into self-employment. More generally, this study pointed to the importance of harnessing attitudes to attributes for generating a high rate of entry into self-employment. The attributes that disadvantaged blacks, relative to Indians, were: lack of educational qualifications; low marriage rates; and the absence of other earners in the household.

The obvious policy prescription that follows from this is to increase the spread, and raise the level, of educational qualifications among blacks. But a less obvious observation, and one that, perhaps, lies beyond the reach of policy, is that the presence of another earner, or other earners, in the household is important in terms of providing a secure financial foundation for entry into self-

employment. In many cases, this foundation takes the form of an earning spouse. The fact that for Indians, on the one hand, marriage rates are much higher, and that the average age at marriage is much lower than for blacks and that, on the other hand, a much higher proportion of Indians, relative to blacks, live in households with more than one earner, are not unrelated. High marriage rates, combined with marriages in which wives work, result, from an early stage of the life-cycle, in more prosperous and financially secure households and such prosperity and security, in turn, provides a spring-board for the husband to enter business. Indians have the advantage of living in such households and, relative to them, blacks do not. For blacks to acquire the attributes that are positively correlated with business entry it is not sufficient to focus on attributes, like education, that relate to the individual. The acquisition of "social" attributes that relate to family formation, and the welding of the family into a cohesive economic unit, are at least as important.

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Notes

¹ See Burrows (1991), Campbell and Daly (1992), Atkinson and Storey (1994), Storey (1994), Meager et al. (1996) and Robson (1998).

² See Blackaby et al. (1997).

³ See Jones et al. (1993) and Blackburn (1994).

⁴ The reluctance of black Caribbeans in Britain to enter self-employment is echoed in a similar reluctance of African-Americans in the USA (see Cashmore, 1991).

⁵ It should be pointed out that the concern of this paper is with the rate of participation, by ethnic minorities, in self-employment and not with the *success* of their ventures. In particular, it is not being suggested that Indian-owned

businesses are more successful than those owned by persons from other ethnic groups. Indeed, evidence on this is mixed with some (for example, Aldrich et al., 1983) suggesting that survival was the dominant aim of Asian firms and that this was often achieved through long hours of work using unpaid family labour and with others suggesting (for example, Clark and Rughani, 1983; Soni et al., 1987) that Asian-owned firms are moving into high value-added sectors and have grown faster than white-owned firms.

⁶ For example, Werbner (1990) described the lives of the Manchester-based (Pakistani) clothing trade community as being "particularly supportive of entrepreneurs" and underpinned by "self-sacrifice, self-denial . . . hard work and saving". These views apply equally well to Indians.

⁷ See Peach (1996) who observes that black Caribbeans do not "differ dramatically in terms of housing tenure, jobs or residential segregation from the white population" . . . they appear "as one of the most integrated groups" (p. 23).

⁸ Black Caribbeans and Indians are, numerically, the two largest ethnic groups in Britain constituting, respectively, 22% and 28% of the ethnic-minority population enumerated in the 1991 Census for Britain (see Owen, 1996).

⁹ Confining the analysis to metropolitan areas went some way towards ensuring that the economic environment was relatively homogenous across the persons in the sample.

¹⁰ See also Ram and Jones (1998) on this point.

¹¹ Following the suggestion of Ballard and Kalra (1994), the category black Caribbean used in this paper was formed by amalgamating two Census categories: "black Caribbean" and "black-other".

¹² See Evans and Javanovic (1989) and Burke (1995) for similar models.

¹³ Since the study relates to men, the masculine pronoun is used throughout.

¹⁴ The square of the age variable – $(AGE_j)^2$ – in equation (7), below, ensured that the marginal effect of age on the long-odds ratio was non-linear so that the size of the effect depended upon the coefficient values and upon the value of the age variable.

¹⁵ The default was no post-18 qualifications.

¹⁶ Relevant only if the person had post-18 qualifications. The default area was arts-related subjects.

¹⁷ Note that the categories white, black and Indian are, from the point of view of this study, collectively exhaustive.

¹⁸ The default category was unskilled.

¹⁹ The default area was London.

²⁰ In terms of the metropolitan areas of Britain: Birmingham; South West; South Yorkshire.

²¹ Manchester; Merseyside; Newcastle; Strathclyde; West Yorkshire.

²² Never married, divorced, or widowed.

²³ The alternative was renting from a local authority or renting privately (furnished or unfurnished), including rent-free accommodation.

²⁴ For ease of reference, the subscript j on the coefficients of the equations have been omitted.

²⁵ Defined as a 21-year old ($AGE = 0$), British-born ($OVb = 0$), unmarried man ($MAR = 0$), with no post-18 educational qualifications ($HED = MED = 0$), living in London

($NTH = STH = 0$), in a household without any other earners ($ERN = 0$) and without any dependent children ($CHD = 0$), and employed in an unskilled capacity ($PMT = SKL = 0$).

²⁶ This would be $(\alpha_3 - \beta_3)$, if the only attribute of the reference person that was changed was being born overseas.

²⁷ In this regard, see Kraybill et al. (1995) on the Amish community in Pennsylvania.

²⁸ On other possible interpretations – such as that some groups may be more inclined to live off welfare and, therefore, disinclined to be either employees or self-employed – the authors can cite no evidence.

²⁹ The equations were estimated using STATA v5.0.

³⁰ That is, to $L_1 = 0$.

³¹ The analysis of this section holds exactly if it was assumed that the entire sample was Indian.

³² So called because they are computed from samples which differ *only* in respect of the ethnicity of the persons comprising the samples.

³³ From Table V, the values of the employment gap and of A , B , C and D were, respectively: 0.1415; 0.0188; 0.1227; 0.0838; and 0.0577.

³⁴ Respectively, $(0.097 - 0.079)$ and $(0.211 - 0.097)$ as percentages of $(0.211 - 0.079)$.

³⁵ Respectively, $(0.211 - 0.129)$ and $(0.129 - 0.079)$ as percentages of $(0.211 - 0.079)$.

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