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Is it (dis)Advantageous to Have Mixed Parentage? Exploring Education & Work Characteristics of Children of Interethnic Unions in Britain

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Abstract

Extant studies commonly claim that mixed ethnic children face difficulties in affiliating with either of the parental ethnic group, which consequently negatively affects their identity development. However, the majority of the existing literature is based on clinical evidence of small highly self-selected samples of those seeking psychological assistance. This paper aims to investigate the socioeconomic outcomes of mixed ethnic children using the Office for National Statistics Longitudinal Study data (N=35,302) which is a nationally representative 1% sample of the population in England and Wales. We hypothesise that an interethnic union between one immigrant parent and one parent from a majority population could promote integration of an offspring. Here educational attainment and employment status are used as indicators of socioeconomic integration. Logistic regression is employed to estimate the probabilities of having a degree qualification and being in employment of mixed ethnic individuals comparing to children of two ethnic minority parents and native children of two native white parents.

Controlling for parental demographic and socio-economic characteristics as well as neighbourhood characteristics, the results suggest that having one native white parent bring children of immigrants closer to the characteristics of the majority population, signalling better integration of children with mixed parentage compared to their counterparts whose both parents are from minority ethnic group.

Keywords

Mixed ethnic, interethnic union, integration, education, employment, ethnic minority.

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Is it (dis)Advantageous to Have Mixed Parentage? Exploring Educational and Labour Characteristics of Children of Interethnic Unions in Britain

Raya Muttarak

1. Introduction

There is evidence that interethnic unions, a partnership between one native (majority) partner and one partner with immigrant background , have become more common over the past decades in many Western countries such as the Australia, US, UK, and France (Australian Bureau of Statistics 2000; Lee and Edmonston 2005; Muttarak 2010; Safi 2008). Since intermarriage is widely regarded as a key indicator of immigrants' integration, consequently extant studies on interethnic partnerships predominantly focus on immigrants' partner choice and partnership formation processes. It is found that immigrants of certain characteristics, such as those born in or living for a long period in a host country, having high level of educational attainment, and living in non-ethnically segregated residential area, are more likely to have a native partner (Dribe and Lundh 2008; Muttarak and Heath 2010). This partner selection process shows that immigrants who are relatively well-integrated in socioeconomic terms are also more likely to be in an interethnic partnership with a native partner.

Arguably, being in an interethnic partnership could further promote socioeconomic integration of intermarried immigrants. A native partner could potentially provide his/her immigrant partner with information, knowledge and know-how of the host society as well as enhance connections to social networks and resources that can be useful for socioeconomic advancement in a host society. Recent few studies focusing on economic consequences of intermarriage on intermarried immigrants show that those who are intermarried have better labour market outcomes than their non-intermarried counterparts (Furtado and Theodoropoulos 2010; Meng and Gregory 2005; Muttarak 2011). If having a native spouse can promote socioeconomic achievement of intermarried immigrants, this raises a question whether having one native parent benefits children of interethnic unions in a similar manner.

Early studies on children of interethnic unions were dominated by literature from psychology or psychiatry disciplines. These studies commonly associate interethnic unions with negative consequences on children (Kerwin and Ponterotto 1995; Kerwin *et al.* 1993; Lyles *et al.* 1985; Tizard and Phoenix 1995). It was explained that because mixed ethnic children do not have a clear position in neither of their parental ethnic groups, they have a problem in identity development, lack sense of belonging and feel marginalized. While the early literatures imply negative outcomes of children of interethnic unions, recent sociological and economic studies show that mixed ethnic children generally have better educational achievement that their peers with two immigrant parents (Furtado 2009; van Ours and Veenman 2010). These findings suggest that growing up with one native parent potentially provides social resources which are useful for educational success of immigrant

children. Likewise, it is also possible that there is a positive selection of intermarried parents, both immigrants and natives alike. By far, empirical studies on children of interethnic unions only focus on academic achievement but little is known whether this positive externality applies also to other outcomes.

This paper investigates the educational attainment and labour market participation of mixed ethnic children (children from an interethnic union of one immigrant parent and one native parent) comparing to second generation (children born in the UK of two immigrant parents from the same ethnic group) and native children (children of two native parents). The empirical analysis is based on the Office for National Statistics (ONS) Longitudinal Study (LS) which links successive Censuses between 1971 and 2001 in England and Wales. This study selects a sample of children aged 8 -18 years who were present with two parents in a household in 1991 and observe their educational attainment and labour market participation patterns in 2001. The level of the highest qualification attained is used an indicator of educational outcome. Being in employment is used as an indicator of labour market outcome. Ethnicity of children is identified according to that of their parents. Controlling for parental socioeconomic characteristics and geographical characteristics, we find that children of interethnic unions have similar educational attainment and labour market participation patterns to those of children of two native parents. The educational and labour market outcomes of children of two immigrant parents are distinctive from those of the natives whereby the former have higher educational attainment but are less likely to be in employment compared to the latter.

This paper has three main contributions to the study of intermarriage and in particular consequences of this union on mixed ethnic children. First, we are able to directly identify ethnic background of the children through self-reported ethnic identification of their parents. It is possible to distinguish not only whether a child is from an interethnic or a co-ethnic union but also a specific ethnic identification of their father and mother. Second, using longitudinal data, this paper overcomes the problem of cross-sectional data whereby parental characteristics are often measured at time of survey when children were still living in the same household as their parents. This measurement is problematic because there might be a selection of older children who remain in parental household despite the usual age of leaving parental home. Since we are able to measure parental socioeconomic background and neighbourhood characteristics during the period when the respondents were growing up, this serves as a reliable control for family background. Third, this paper adds new empirical evidence on the outcomes of mixed ethnic children in the UK. While extant studies commonly use academic achievement (e. g. grades, school dropout and highest educational attainment) as an outcome indicator, this paper investigates both education and employment prospects. It is important to explore the latter because immigrants are often found to be disadvantaged in the host country labour market despite their educational qualifications. In addition, albeit a growing number of children of interethnic unions in the UK (Platt 2009), little is known how they fare in terms of socioeconomic attainment. This study provides empirical findings in this respect.

The structure of the paper is as follows Section 2 discusses theoretical concepts from which hypotheses are derived. Section 3 describes data, variables and method used.

Section 4 presents descriptive results and multivariate results from logistic regression estimates. Section 5 provides conclusions and discussion of the findings.

2. Theoretical Background and Hypotheses

There is no clear evidence how children of interethnic unions fare in socioeconomic terms. The relatively well-developed literature on education and labour market outcomes of immigrants in Western societies show that ethnic disadvantages persist even amongst the second generation born and grew up in a host society (Heath *et al.* 2008). Apart from parental socioeconomic background which substantially explain ethnic inequalities (Levels and Dronkers 2008; Marks 2005), immigrant parents might also lack of fluency in host country language (Chiswick *et al.* 2005; Dustmann and Fabbri 2003; van de Werfhorst and van Tubergen 2007) and knowledge in host country educational and labour market systems (Kristen 2008) which are crucial in socioeconomic achievement. Even though some immigrant parents are rich in socioeconomic resources in their country of origins, migration could disrupt intergenerational transfer of human, cultural and social capital between parents and children (Clark *et al.* 2009). Likewise ethnic composition is found to be associated with academic and labour market success of immigrant children (Gronqvist 2006; Van der Slik *et al.* 2006). Living in an area with high ethnic concentration, which often corresponds with socially deprived neighbourhoods and schools, could further undermine their education and labour market success. Besides, immigrant socioeconomic disadvantage could also be explained by discrimination and racism. For instance, children of immigrants often experience lower teacher expectations (Stevens 2007) and difficulties in access to employment (Fibbi *et al.* 2006).

These studies show that parental migration status and experiences as well as belonging to a minority ethnic group could have unfavourable consequences on their children's educational achievement and economic success in a host country. This raises a question whether growing up with one native parent could mitigate these disadvantages. Here the social capital theory could be applied to explain the expected outcomes of children of interethnic unions between one native parent and one immigrant parent. Putnam (2000) has made an important distinction between 'bridging social capital' (outside community relations) and 'bonding social capital' (within community relations). For immigrants, contacts with natives i.e. bridging social capital can diversify their social resources and local information as well as enhance access to host society institutions. Bridging social capital is found to have positive returns on immigrants labour market prospect (Lancee 2010) while bonding ties are embedded in closed networks with limited flow of the same information. This suggests that children of interethnic unions might have better achievement than children of two immigrant parents in coethnic unions because the former enjoy the benefit of bridging social capital provided by their native parent. Apart from an obvious language proficiency benefit, the native parents could provide their children with knowledge and know-how of host country education and labour market systems, connect them with useful social networks and facilitate access to host country institutions. This leads to a hypothesis that *children of interethnic unions have better educational and labour market outcomes than children of two immigrant parents (H1)*.

With respect to literatures on mixed ethnic children, in general, studies investigating specifically children of interethnic unions are less established as compared to those that focus on children of immigrants. The development of literatures on mixed ethnic children can be broadly divided into two periods. The first period (1950s – 1990s) is mainly dominated by a theoretical account from Chicago school sociology and clinical studies from psychology and psychiatry disciplines. In the second period (2000s onwards), empirical studies from sociology and economics have become more prominent. Theoretical framework and findings from these literatures and corresponding hypotheses are described below.

2.1 Early Studies on Mixed Ethnic Children (1950s-1990s)

Early sociological studies of mixed ethnic populations were dominated by those of the Chicago School sociologists, especially Robert E. Park and Everitt V. Stonequist, a student of Park. Park introduced the concept of 'marginal man' which refers to individuals with an unstable personality because he is subjected to emotional and cultural conflicts from being on the periphery of two diverse groups (Park 1928, 1950). Stonequist (1942) added that a 'marginal man' suffers with the possible rejection and lacks of the sense of belonging to a particular culture or race. The 'marginal man' thesis implies a negative identity development and this perception has dominated studies on multiracial/mixed ethnic individuals until present.

Accordingly, it was commonly presented in academic writings that people of mixed ethnic background are likely to develop emotional, health and behavioural problems because their mixed identities adversely affect their social interactions and integration into an ethnically homogenous society (Brandell 1988; Gibbs 1987; Gibbs 1998; Kerwin and Ponterotto 1995; Kerwin et al. 1993; Lyles et al. 1985; Tizard and Phoenix 1995). It is argued that being exposed to different cultures from both the country of origin and the country of destination, children of immigrants generally experience greater difficulties in identity formation compared to native-born children (Dornbusch 1989; Phinney 1992). The situation is even more problematic for children of interethnic unions whose parents are from different ethnic groups since they might have difficulty in gaining acceptance into either or both of their parents' ethnic group. The in-between (ethnic) position of mixed ethnic children could isolate them from paternal and maternal ethnic groups resulting in low self-esteem (Gibbs and Huang 1989; Rosenberg *et al.* 1995). The problems of identity formation and lack of social acceptance consequently can pose a negative impact on their educational performance and labour market success. Thus we hypothesize that *children of interethnic unions have the worst educational and labour market outcomes, worse than both children of two native-born parents and children of two immigrant parents (H2)*.

Nevertheless, note that there are two main methodological and theoretical problems in the research mentioned above. First, the literature that provides evidence of psychological and developmental setbacks of mixed ethnic children is subjected to a problem of sample selection bias. The sample used in these studies was drawn exclusively from clinical populations which predominate with individuals who need counselling service or clinical treatment (Gibbs and Moskowitzsweet 1991; Lyles et al. 1985).

Selecting only the sample of mixed ethnic individuals who came to seek counselling in the studies would naturally lead to a conclusion that these people tend to experience psychological problems.

Second, the mechanism which explains how self-esteem affects academic performance is not clear. Kao (1999) notes that although it is evident that there is an association between self-esteem and educational outcomes, it remains debatable whether high self-esteem leads to academic success or whether academic achievement increases an individual's self-esteem. Besides, Rosenberg et al. (1995) found that it is academic self-esteem that exerts greatest influence on schooling outcomes not identity self-esteem in terms of an ethnic identity formation. Thus, the relationship between low self-esteem and socioeconomic achievement is not conclusive.

2.2 Recent Studies on Mixed Ethnic Children (Late 1990s – 2000s Onwards)

Only until recently that research on children of interethnic unions has shifted the focus from psychological and identity issues to their educational outcomes (Harris and Thomas 2002; Kao 1999). Focusing on mixed ethnic children in the US, these studies suggest that having multiple ethnic identities need not always be problematic as claimed by most psychological and clinical literature. Using mathematics test scores and grade point averages (GPA) measured at the eighth grade as indicators of academic achievement, Kao (1999) found no statistical evidence of lower-esteem amongst mixed ethnic children as compared to Whites and non-Whites. She reported that mixed White-Asian children resemble Whites in their academic performance while mixed White-Black children achieve similar schooling outcomes as Blacks.

Although Kao's study provides new empirical evidence on the academic performance of mixed ethnic individuals, the drawback of the study lies in the measurement of ethnic categories. Since there is no direct indicator of mixed ethnic identity in her data, mixed ethnic individuals are located if the self-identified ethnicity of the children is not consistent with that of their parents. This speculative measurement of mixed ethnic identity could lead to bias in the findings.

A later study by Harris and Thomas (2002) on the educational outcomes of mixed ethnic adolescents employed a better measurement of ethnic identity. Respondents are identified as being mixed ethnic if they select: 1) more than one single-ethnicity in the school or home survey; and 2) different ethnic category in the school and home surveys. This study yields different conclusion from that of Kao's. It is reported that ethnic diversity in academic achievement depends considerably on the outcome measured. For example, mixed white-Asians appear to have lower GPA than non-mixed whites and non-mixed Asians while mixed white-blacks achieve similar GPA with non-mixed black youths. Yet, in terms of vocabulary test scores, white-Asian fare similarly to non-mixed whites youth.

Harris and Thomas remarked that their findings might be subject to how ethnicity is reported because self-ethnic identification could be influenced by stereotypes about ethnicity and educational performance. It is argued that mixed ethnic youth will choose to

identify themselves closely to an immigrant parent or a white parent depending on their academic achievement. If this is the case, the causal direction is reverse and ethnic self-identification becomes an invalid measurement of mixed ethnic identity.

A recent study by Futardo (2009) using the 5% Public Use Samples of the 2000 US Census shows that children of a union between one native-born parent and one foreign-born parent have lower high school dropout rates compared to children with two foreign-born parents. Using instrumental variable methods to deal with plausible unobservable characteristics of intermarried foreign-born immigrants, she found a reverse relationship whereby children of immigrants that marry natives are more likely to drop out of high school than children of two immigrant parents.

Although there could be a (positive or negative) selection of immigrants who chose to marry a native, the instrumental variable approach could not entirely solve this selection problem especially when proper instruments are not available. Futardo intended to use the proportion of foreign-born of the never married opposite-sex population in the immigrant's age group in the state where he or she lived prior to marriage as an instrumental variable. However, lacking information on date of marriage and date of moving into a current residence, this instrumental variable cannot adequately describe the marriage market structure which could affect an immigrant's propensity to marry a native. Another issue with this study is that a native is defined as any US-born individuals without distinguishing between different ethnic backgrounds. This consequently might affect the interpretation of the results. Educational outcomes of children of one immigrant parent with a native-born African American parent, for example, is likely to differ from their peers with a native-born White-American parent. Using only the foreign-/native-born distinction in inadequate because there is substantial group variation in socioeconomic attainment.

Despite the drawbacks, these studies provide primary empirical evidence on academic performance of children of interethnic unions. The results vary depending on which educational outcomes and which ethnic groups are being referred to. In the US case, academic achievement of mixed ethnic children is found to either: 1) resemble that of Whites; 2) lie between that of Whites and minority ethnic groups; or 3) resemble that of minority ethnic groups. None of the findings suggest that children of interethnic unions have the poorest educational outcomes. Who mixed ethnic children resemble to depend on outcomes measured and the ethnic group of their ethnic minority parents. The third hypothesis thus predicts three possible outcomes of mixed ethnic children as the following:
– *Children of interethnic unions have similar educational and labour market outcomes to children of two native-born parents (H3.1).*
– *Children of interethnic unions have similar educational and labour market outcomes to children of two immigrant parents (H3.2).*
– *Educational and labour market outcomes of children of interethnic unions lie in-between those of two native-born parents and those of two immigrant parents (H3.3).*

3. Data, Variables and Methods

3.1 Data

The empirical analysis of this study is based on the ONS Longitudinal Study (LS), which links successive Censuses from 1971 to 2001, covering 1% sample of the population of England and Wales. The sample was initially obtained from the 1971 Census, based on four birth dates (day and month) in the calendar year. The sample is updated at each Census year and accounts for approximately 540,000 people at any one census.

This data is appropriate for our research question which aims to investigate educational attainment and employment status of children of interethnic unions since it contains a relatively large number of members from minority ethnic groups to perform statistical analyses. The Census information is also included for all people enumerated in the same household as an LS member. This allows us to match father, mother and children and identify their demographic, socioeconomic background and household economic resources when the studied members were living with their parents.

Another key advantage of using the LS data in this study is that it solves the problem of a possible sample selection bias of children aged over 20 who remain in a household. In cross-sectional data, the household-level and parental information is available only when the individuals remain in a household. Since this study aims to investigate the educational attainment and employment status of individuals aged 18 – 28 years old in 2001, this could result in a selection bias of individuals who still live with their parents after the average age of leaving parental home, which is early 20s in Britain (Holdsworth 2000; Kerckhoff and Macrae 1992). The LS data allows us to select the sample of children who were in a household in 1991 and link them with their parents' information in 1991. We can then estimate the children's educational and labour outcomes in 2001 while using parental information in 1991.

This study is based on the 1991 and 2001 LS data. The sample selected for the analysis consists of children who 1) were present both in 1991 and 2001; 2) were born in the UK; 3) were not full-time students in 2001; 4) aged between 8 - 18 in 1991; and 5) lived with two parents in 1991. Children of single-parent are excluded from the analysis because we require ethnic categories of both parents to identify whether the parents are in an interethnic union. Children from an interethnic union between two immigrant parents from different ethnic groups are not included in the analysis because the events are rather rare and the main focus of this study is on an interethnic union between one native-born parent and one immigrant parent. We finally obtain a sample of 35,302 children whereby 332 of them were offspring of an interethnic union.

In this study, the ethnicity of an individual is classified according to his/her parents' ethnic origins in 1991. The census questionnaire of 1991 asked the respondents to tick or write in their 'descent' or 'ancestry'. Ethnicity of parents in 1991 is recoded into 9 categories namely White, Black Caribbean, Black African, Indian, Pakistani, Bangladeshi, Chinese, Mixed and other ethnic group. Table 1 presents children's ethnic group derived

from ethnic identification of their two parents (regardless of the gender of the parents) and their sample size.

Table 1: Classification of children ethnic categories according to parents' ethnic identification

Parent 1's ethnicity	Parent 2's ethnicity	Child's ethnicity	N
White	White	White	33,481
Black Caribbean	Black Caribbean	Black Caribbean	131
Black African	Black African	Black African	48
Indian	Indian	Indian	657
Pakistani	Pakistani	Pakistani & Bangladeshi	469
Bangladeshi	Bangladeshi	Pakistani & Bangladeshi	
Chinese	Chinese	Chinese	70
Mixed	Mixed	Mixed	9
Other ethnic	Other ethnic	Other ethnic	105
White	Black Caribbean	Mixed White-Black Caribbean	73
White	Black African	Mixed White-Black African	26
White	Indian	Mixed White-Indian	48
White	Pakistani	Mixed White-Pakistani/Bangladeshi	24
White	Bangladeshi	Mixed White-Pakistani/Bangladeshi	
White	Chinese	Mixed White-Chinese	16
White	Mixed	Mixed White-Mixed	46
White	Other ethnic	Mixed White-other ethnic	99
Total			35,302

Source: ONS LS 1991 and 2001.

3.2 Dependent Variables

Educational attainment: Having a degree qualification in 2001 is used as a measure for educational attainment. Educational attainment is closely related to labour market success of ethnic minorities (Leslie and Lindley 2001; Lindley *et al.* 2006). Degree qualification is important not only for obtaining employment but also for social mobility (Shavit and Müller 1998). Attaining a degree qualification in 2001 is coded 1, 0 otherwise.

Labour market participation: Being in employment in 2001 is an indicator of labour market participation. The employment gap between immigrants and natives persists even amongst the second generation for many ethnic groups (Algan *et al.* 2010). Being out of the labour force has several negative consequences on life course outcomes from health, wellbeing to fertility (Lundin *et al.* 2010; Özcan *et al.* 2010). Being in employment in 2001 is code 1, 0 otherwise.

3.3 Independent Variables

Children's ethnicity is derived from father's and mother's ethnicity in 1991. Children's ethnicity is divided into 15 categories. The first 8 categories, namely, White, Black-Caribbean, Black African, Indian, Pakistani & Bangladeshi, Chinese, Mixed and Other

ethnic, refer to children of a coethnic union whose both father and mother are from the same ethnic groups. The last 7 categories, namely, Mixed White-Black Caribbean, Mixed White-Black African, Mixed White-Indian, Mixed White-Pakistani/Bangladeshi, Mixed White-Chinese, and Mixed White-Mixed and Mixed White-other ethnic, refer to children of an interethnic union whose one parent is White and another parent is from a non-White ethnic group[1].

Parents' education refers to parents' highest educational qualification which is divided into 3 categories: degree, subdegree and other/no/missing qualification[2]. Children socioeconomic success is strongly determined by parents' education. Particularly for immigrants, parents' education substantially explains their education and labour market disadvantages in a host country (Kao and Thompson 2003) Even amongst the relatively highly educated immigrants, educational qualifications obtained from their country of origins might not be fully applicable in the country of destination (Heath and Cheung 2007). Unfortunately, it is not possible to distinguish overseas qualifications in the 1991 Census. Degree and subdegree qualifications here refer to the qualifications obtained in the UK.

Parents' occupational status is a proxy for parental socioeconomic status. It is widely established that children whose parents are in lower socioeconomic strata have poorer education and labour market prospects (Breen and Jonsson 2005). Since first generation immigrants generally have disadvantaged socioeconomic positions in a host country, this could partially explain lower socioeconomic attainment of their children (Heath and Yu 2005) Parents' occupational status is measured according to the National Statistics Socio-economic Classification (NS-SEC) which is classified into 7 categories: high professional & managerial, low professional & managerial, skilled non-manual, self-employed (own account worker), skilled manual, routine and manual, and never worked & long-term unemployed. Parents' occupational status is allocated using the 'dominance approach' (Goldthorpe *et al.* 1987). Where two parents were present and held different occupations, the higher of the two is allocated as the parental occupational status.

3.4 Control Variables

3.4.1 Control Variables for Models Estimating Educational Attainment and Employment Status

- *Age* in 2001 is measured as a continuous variable.

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[1] We have also run a model where mixed ethnic children are identified according to parental ethnicity and gender to test whether there is any additional difference in educational and labour outcomes due to the genders of the parent. This model does not fit the data better and has a problem of low number of observations in some groups. We therefore decided to focus only on the ethnicity of the parents regardless of the gender.

[2] It should be noted that the 1991 Census records limited details of educational qualifications. Only the information about higher qualifications obtained after the age of eighteen was collected. Therefore, information about middle or high school qualifications such as GCSE, 'A' level or vocational qualification is not available. We could only distinguish between 'degree' and 'subdegree' qualification while the rest includes all individuals with other/ no qualification or missing information on qualification.

- *Female* is a dummy variable coded 1 if the subject is female, 0 otherwise. In the UK, the proportion of those having a degree qualification is higher in women than in men (ONS 2007) In contrast, with respect to labour force participation, the proportion of men in employment is higher than that of women (ONS 2007, 2008).
- *Religious affiliation* is divided into 9 categories: religion not stated, Christian, Buddhist, Hindu, Jewish, Muslim, Sikh, other religion and no religion. Socioeconomic outcomes of immigrants are varied by their religious affiliation (Burgess *et al.* 2009; Khattab 2009). Religion is controlled for in order to isolate the effects of religion from the effects of ethnic background on education and labour market outcomes.
- *Parents' country of birth* refers to where parents were born. Having one or both parents born in a host country can facilitate immigrant children socioeconomic integration because the native-born parents themselves were socialized and have acquired their human, cultural and social capital in a host society. This variable is divided into 3 categories: both parents born in the UK, one parent born in the UK, and both parents born overseas.
- *Housing tenure* is grouped into four categories: owner occupied, council housing, private rented and other type of housing. This variable is measured in 1991 capturing the type of home ownership the children were embedded in when they were growing up. Housing tenure is an additional measure of socioeconomic position of the parents.

3.4.2 Additional Control Variable for the Model Estimating Educational Attainment

- *Ethnic composition in area of residence*: These variables measure the percentage share of each (relatively large) ethnic group (White, Black Caribbean, Black African, Black other, Indian, Pakistani and Bangladeshi and Chinese) in a ward of residence in 1991. Previous studies found that ethnic composition in a residential area is correlated with schooling outcomes and its effect could vary by ethnic groups (Halpern-Felsher *et al.* 1997).

3.4.3 Additional Control Variables for the Model Estimating Employment Status

- *Educational qualification* of an individual in 2001 is controlled for. The positive relationship between educational qualification and employment status is confirmed in other studies. Educational qualification is divided into six categories: no qualification, level 1 (1+ O level/NVQ level 1), level 2 (5+ O levels), level 3 (2+ A levels), level 4/5 (higher qualifications, first degree, higher degree) and other qualifications.
- *Limiting long-term illness*, measured in 1991, is a dummy variable of whether or not an individual has a long-term illness that limits their activities. Health conditions are significantly related with labour market participation.
- *Percentage unemployed and its square term* are continuous variables measuring the proportion of unemployed adults in the region of residence. Labour market

participation is also highly correlated with labour market structure of the area where one lives.

- *Region of residence* measured in 2001 is divided into 10 regions: North East, North West, Yorkshire and the Humber, East Midlands, West Midlands, East of England, London, South East, South West and Wales.

Table 2 provides a description of all variables used in the analyses.

Table 2: Descriptive statistics of dependent and independent variables

	Mean	Sd	Range	Mean	Sd	Range
Dependent variables						
Degree qualification or higher	0.26	0.44	0-1	-	-	-
In employment	-	-	-	0.83	0.375	0-1
Independent variables						
Individual characteristics						
Female	0.50	0.50	0-1	0.50	0.500	0-1
Age	25.15	2.00	22-28	23.55	3.051	18-28
Religious affiliation						
Not stated	0.07	0.25	0-1	0.07	0.248	0-1
Buddhist	0.002	0.04	0-1	0.002	0.039	0-1
Hindu	0.01	0.09	0-1	0.01	0.085	0-1
Jewish	0.005	0.07	0-1	0.004	0.063	0-1
Muslim	0.02	0.12	0-1	0.02	0.131	0-1
Sikh	0.01	0.09	0-1	0.01	0.084	0-1
Other religion	0.003	0.05	0-1	0.002	0.050	0-1
No religion	0.25	0.43	0-1	0.24	0.427	0-1
Educational qualification						
No qualification				0.09	0.292	0-1
Level 1				0.19	0.396	0-1
Level 2				0.30	0.456	0-1
Level 3				0.16	0.371	0-1
Other qualifications				0.02	0.152	0-1
Have limiting long term illness				0.06	0.234	0-1
Housing tenure						
Own house	0.83	0.38	0-1	0.81	0.392	0-1
Private rent	0.02	0.13	0-1	0.02	0.131	0-1
Other housing tenure	0.03	0.18	0-1	0.04	0.185	0-1
Parental characteristics						
Parents' occupational status						
High professional & managerial	0.06	0.24	0-1	0.05	0.224	0-1
Low professional & managerial	0.39	0.49	0-1	0.37	0.484	0-1
Skilled non-manual	0.20	0.40	0-1	0.20	0.399	0-1
Self-employed	0.07	0.26	0-1	0.08	0.267	0-1
Skilled manual	0.16	0.37	0-1	0.17	0.377	0-1
Unemployed	0.02	0.15	0-1	0.02	0.153	0-1
Missing information	0.001	0.03	0-1	0.001	0.033	0-1
Parents' education						
Both parents have degree	0.02	0.15	0-1	0.02	0.139	0-1
One parent has degree	0.09	0.28	0-1	0.08	0.268	0-1
Both parents have subdegree qualification	0.02	0.13	0-1	0.01	0.121	0-1
One parent has subdegree qualification	0.10	0.30	0-1	0.09	0.290	0-1
Parents country of birth						
One parent born in UK	0.05	0.22	0-1	0.05	0.224	0-1
Both parents born overseas	0.05	0.22	0-1	0.05	0.219	0-1

	Mean	Sd	Range	Mean	Sd	Range
Table 2 (continued)						
Geographical characteristics						
Ethnic composition in residential area						
Percentage White	9.42	0.96	0.97-10.09			
Percentage Black Caribbean	0.07	0.20	0-3.01			
Percentage Black African	0.02	0.08	0-2.66			
Percentage Black other	0.03	0.05	0-0.95			
Percentage Indian	0.15	0.46	0-6.7			
Percentage Pakistani	0.08	0.33	0-5.28			
Percentage Bangladeshi	0.02	0.12	0-6.07			
Region of residence						
North East				0.05	0.220	0-1
North West				0.13	0.332	0-1
Yorkshire & the Humber				0.10	0.300	0-1
East Midlands				0.09	0.280	0-1
West Midlands				0.11	0.311	0-1
East of England				0.11	0.313	0-1
South East				0.11	0.317	0-1
South West				0.09	0.293	0-1
Wales				0.05	0.225	0-1
Percentage unemployed				5.04	1.124	2.17-7.58
Percentage unemployed squared				26.68	10.393	4.72-57.39

Source: ONS LS 1991 and 2001.

3.5 Method

Since the outcomes of interest are binary, logistic regression model is employed for the estimation of 1) the probability of having a degree qualification; and 2) the probability being in employment, controlling for individual, parental and macro-structural characteristics as described in section 3. 2 – 3. 4.

4. Results

4.1 Descriptive Results

Table 3 presents the percentage distribution of those with a degree qualification (sample of 22 – 28 years old) and those in employment (sample of 18 – 28 years old) in 2001. Ethnic disparities in educational attainment are distinctive. Compared to children of two white parents, children of two ethnic minority parents of all ethnic groups have higher rates of obtaining a degree qualification in 2001. The gap is particularly large for children with two Indian, Chinese, Black African and other ethnic parents. With respect to children of interethnic unions, there is no clear pattern in their educational attainment. Some groups (e. g. White-Black African & other and White-Black Caribbean) resemble their peers with two white parents, some groups have in-between outcomes (e. g. White-other ethnic and White-Chinese) while some groups are more similar to their peers with two ethnic minority parents in a coethnic union (e. g. White-Pakistani/Bangladeshi and White-Indian).

On the other hand, with respect to employment pattern, children of coethnic unions of all minority ethnic groups apart from Chinese have lower rates of labour market participation than children of two white parents. For children of interethnic unions, most groups have in-between outcomes whereby their rates of labour market participation are in-between those of their non-mixed white and ethnic minority counterparts. The rates of employment of children of the White-Indian and White-Pakistani/Bangladeshi unions resemble that of their peers with two white parents.

Table 3: Percentages having a degree qualification (sample of 22 – 28 years old) and being in employment (sample of 18 – 28 years old) in 2001 by ethnic groups

	% Having degree qualification	N	% Being in employment	N
White	24.7	23,635	83.5	33,481
Black Caribbean	34.4	96	71.8	131
Black African	48.6	35	70.8	48
Indian	46.7	508	77.6	657
Pakistani & Bangladeshi	30.4	293	56.3	469
Chinese	64.5	62	95.7	70
Other ethnic	50.0	78	73.3	105
Mixed	37.5	8	77.8	9
White-Black Caribbean	29.2	48	75.3	73
White-Black African & other	22.7	22	76.9	26
White-Indian	47.4	38	85.4	48
White-Pakistani	35.0	20	87.5	24
White-Chinese	41.7	12	75.0	16
White-Mixed	32.0	25	78.3	46
White-other ethnic	33.3	60	74.7	99
Total	25.5	24,940	82.9	35,302

Source: ONS LS 1991 and 2001.

The findings that children of two ethnic minority parents have higher rates of having a degree qualification but lower rates of being in employment compared to children of two white parents are consistent with previous studies in the UK (Dustmann and Theodoropoulos 2010). It was explained that immigrant parents and children of immigrants have higher educational aspirations than their native-born counterparts resulting in the overrepresentation of children of immigrants in higher educational institutions. In spite of their high educational qualifications, children of immigrants remain disadvantaged in the labour market as our findings also show that they have lower rates of labour market participation compared to their white peers.

The educational attainment and labour market participation patterns are less clear for children of interethnic unions. Depending on ethnic groups of their minority ethnic parents and outcomes measured, mixed ethnic children have three possible paths: resemble non-mixed white children, resemble non-mixed ethnic minority children and in-between the two groups. There is no evidence that children of interethnic unions have worse outcomes than their peers whose both parents are from the same ethnic group.

Next, we turn to multivariate results which account for differences in individual, parental and macro-structural characteristics.

4.2 Logistic Regression Results

Tables 4 and 5 present the estimated parameters for the log odds of attaining a degree qualification and being in employment respectively. Model 1 controls for individual characteristics and Model 2 additionally controls for parental and geographical characteristics. Children of two white parents are a reference category.

4.2.1 Probability of Attaining a Degree Qualification

In Table 4, Model 1 shows that age, gender and religious affiliation have significant effects on the likelihood of attaining a degree qualification. Ethnicity has an independent effect from these individual characteristics. Children of two ethnic minority parents of all ethnic groups significantly have higher chance of attaining a degree qualification than their non-mixed white peers. On the other hand, the probability of having a degree qualification for children of interethnic unions of all ethnic combination except for mixed White-Indian, is not significantly different from their non-mixed white counterparts.

Model 2 shows that parental characteristics and ethnic composition in a ward of residence also have significant effects on educational attainment. Parents' education and occupational status have expected positive relationships with the likelihood of having a degree qualification. Similarly, children who lived in council housing in 1991 compared to those who lived in other housing tenure types, are less likely to attain a degree qualification in 2001. Those who have at least one parent born outside the UK also have higher probability of attaining a degree qualification compared to their peers whose both parents were born in the UK. The higher the percentages of Black other, Indian and Pakistani in the ward of residence, the lower the chance of having a degree qualification.

Taking into account parental and geographic characteristics, children of two Pakistani & Bangladeshi, Chinese and other ethnic parents still significantly have higher chance of attaining a degree qualification than their non-mixed white peers (though the size of the coefficients reduce). For children of interethnic unions, they do not significantly differ from children of two white parents in their propensity to have a degree qualification.

Table 4: Logistic estimates of the probability of having a degree qualification in 2001 (sample of 22 – 28 years old, N=24,847)

	Model 1		Model 2	
	B	s.e.	B	s.e.
Ethnic group				
White (ref)				
Black Caribbean	**0.53**	0.22	0.27	0.27
Black African	**1.11**	0.35	0.19	0.41
Indian	**0.74**	0.21	0.41	0.26
Pakistani & Bangladeshi	**0.73**	0.23	**0.73**	0.28
Chinese	**1.50**	0.27	**1.24**	0.32
Other ethnic	**1.25**	0.24	**0.90**	0.29
Mixed	0.69	0.73	0.68	0.79
White-Black Caribbean	0.28	0.32	0.35	0.37
White-Black African & other	-0.07	0.51	-0.80	0.61
White-Indian	**0.99**	0.33	0.26	0.40
White-Pakistani & Bangladeshi	0.53	0.47	-0.19	0.55
White-Chinese	0.69	0.59	0.14	0.65
White-Mixed	0.34	0.43	-0.13	0.53
White-other ethnic	0.45	0.28	-0.24	0.32
Female	**0.20**	0.03	**0.27**	0.03
Age	**0.02**	0.01	**0.03**	0.01
Religious affiliation				
Christian (ref)				
Not stated	0.02	0.06	0.03	0.07
Buddhist	**0.77**	0.35	0.19	0.38
Hindu	**0.92**	0.24	**0.99**	0.27
Jewish	**1.25**	0.19	**0.78**	0.22
Muslim	*-0.39*	0.22	-0.26	0.24
Sikh	0.03	0.25	*0.49*	0.28
Other religion	**0.86**	0.25	**0.56**	0.29
No religion	**0.33**	0.03	**0.24**	0.04
Parents' occupational status				
Manual & routine (ref)				
High professional & managerial			**0.97**	0.10
Low professional & managerial			**0.83**	0.08
Skilled non-manual			**0.62**	0.08
Self-employed			*0.19*	0.10
Skilled manual			-0.05	0.09
Unemployed			-0.04	0.17
Missing information			0.72	0.48
Parents' education				
Other & no qualification/missing (ref)				
Both parents have degree			**2.49**	0.12
One parent has degree			**1.78**	0.06
Both parents have subdegree qualification			**1.68**	0.11
One parent has subdegree qualification			**0.82**	0.05
Parents country of birth				
Both parents born in UK (ref)				
One parent born in UK			**0.25**	0.07
Both parents born overseas			**0.88**	0.13
Housing tenure				
Council housing (ref)				
Own house			**1.08**	0.08
Private rent			**0.54**	0.17

	Model 1		Model 2	
	B	s.e.	B	s.e.
Table 4 (continued)				
Other housing tenure			**0.47**	0.13
Ethnic composition in residential area				
Percentage White			-0.17	0.30
Percentage Black Caribbean			0.15	0.40
Percentage Black African			-0.67	0.63
Percentage Black other			**-6.69**	1.39
Percentage Indian			**-0.31**	0.13
Percentage Pakistani			**-0.66**	0.16
Percentage Bangladeshi			0.20	0.31
Percentage Chinese			**1.15**	0.42
Constant	-1.85	0.19	-2.03	1.56
Model chi2 (df)	429.65(24)		4979.64(56)	

Source: ONS LS 1991 and 2001.

Note: Statistically significant results at least at the .05 and .10 level are highlighted in bold and italicized respectively.

Table 5: Logistic estimates of the probability of being in employment in 2001 (sample of 18 – 28 years old, N=35,236)

	Model 1		Model 2	
	B	s.e.	B	s.e.
Ethnic group				
White (ref)				
Black Caribbean	**-1.12**	0.21	**-1.08**	0.24
Black African	**-1.06**	0.35	**-0.97**	0.37
Indian	-0.24	0.21	-0.20	0.24
Pakistani & Bangladeshi	**-0.43**	0.21	-0.30	0.24
Chinese	*1.03*	0.61	1.04	0.62
Other ethnic	**-0.51**	0.27	*-0.51*	0.29
Mixed	-0.69	0.89	-0.75	0.90
White-Black Caribbean	*-0.55*	0.30	-0.38	0.31
White-Black African & other	-0.46	0.51	-0.33	0.53
White-Indian	-0.17	0.43	0.02	0.44
White-Pakistani & Bangladeshi	0.64	0.72	0.79	0.73
White-Chinese	-0.96	0.60	-0.96	0.61
White-Mixed	-0.23	0.40	-0.17	0.40
White-other ethnic	**-0.54**	0.26	*-0.50*	0.27
Female	**-0.87**	0.03	**-0.85**	0.03
Age	**0.03**	0.01	**0.03**	0.01
Religious affiliation				
Christian (ref)				
Not stated	**-0.32**	0.06	**-0.29**	0.06
Buddhist	0.24	0.54	0.34	0.55
Hindu	-0.40	0.27	-0.42	0.27
Jewish	**-0.61**	0.24	**-0.69**	0.24
Muslim	**-1.09**	0.20	**-0.98**	0.20
Sikh	*-0.46*	0.26	-0.41	0.27
Other religion	**-1.11**	0.26	**-1.09**	0.26
No religion	**-0.24**	0.04	**-0.22**	0.04
Educational qualification				
Level 4/5 (ref)				
No qualification	**-2.33**	0.06	**-2.11**	0.06
Level 1	**-1.23**	0.05	**-1.16**	0.06
Level 2	**-0.67**	0.05	**-0.65**	0.06
Level 3	**-0.28**	0.06	**-0.28**	0.06
Other qualifications	**-1.57**	0.09	**-1.40**	0.10
Have limiting long term illness	**-1.79**	0.05	**-1.78**	0.05
Parents' occupational status				
Routine & manual (ref)				
High professional & managerial			**0.20**	0.10
Low professional & managerial			**0.21**	0.06
Skilled non-manual			**0.30**	0.06
Self-employed			-0.07	0.07
Skilled manual			0.02	0.06
Unemployed			**-0.51**	0.09
Missing information			0.25	0.47
Parents' education				
Other & no qualification/missing (ref)				
Both parents have degree			**-0.56**	0.13
One parent has degree			**-0.21**	0.08
Both parents have subdegree qualification			-0.09	0.16
One parent has subdegree qualification			-0.05	0.06

| | Model 1 | | Model 2 | |
	B	s.e.	B	s.e.
Table 5 (continued)				
Parents country of birth				
Both parents born in UK (ref)				
One parent born in UK			**-0.16**	0.07
Both parents born overseas			-0.04	0.14
Housing tenure				
Council housing (ref)				
Own house			**0.46**	0.04
Private rent			**0.31**	0.12
Other housing tenure			**0.21**	0.08
Region of residence				
London (ref)				
North East			**-0.17**	0.08
North West			0.01	0.07
Yorkshire & the Humber			0.06	0.07
East Midlands			0.06	0.07
West Midlands			0.06	0.07
East of England			0.00	0.06
South East			**0.20**	0.07
South West			0.10	0.07
Wales			-0.10	0.08
Percentage unemployed			**-0.31**	0.13
Percentage unemployed squared			0.02	0.01
Constant	2.48	0.14	3.11	0.32
Model chi2 (df)	4830.93(30)		4979.64(56)	

Source: ONS LS 1991 and 2001.

Note: Statistically significant results at least at the .05 and .10 level are highlighted in bold and italicized respectively.

4.2.2 Probability of Being in Employment

Turning to the probability of being in employment in Table 5, it is shown in Model 1 that ethnicity and parents' partnership type have independent effects from other individual characteristics (age, gender, religions affiliation, educational qualification having limiting long-term illness) in the likelihood of labour market participation. Given the same educational qualification, children of two ethnic minority parents of most ethnic groups (Black Caribbean, Black African, Pakistani & Bangladeshi and other ethnic) still significantly have lower chance of being in employment than their peers with two white parents. As for children of interethnic unions, apart from children of White-other ethnic partnerships, their likelihood of labour market participation does not significantly differ from that of their non-mixed white peers.

Model 2 shows that parental and geographical characteristics influence labour market participation in an expected direction. The higher the educational qualification and occupational status of the parents, the higher the likelihood of being in employment. Those who live in a region with high proportion of unemployed adults also significantly have lower chance of being in employment themselves.

Controlling for parental and geographical characteristics in Model 2, ethnic disparities in employment patterns remain though the magnitude of the effects slightly reduce. Children of coethnic unions of two minority ethnic parents particularly from Black Caribbean and Black African ethnic groups have significantly lower chance of being in employment compared to their peers with two white parents. On the other hand, the employment chance for children of interethnic unions does not substantially different from their counterparts with two white parents.

4.3 Predicted Probabilities

In order to make the results easier to interpret, we plot graphs of predicted values of the probability of attaining a degree qualification and being in employment for each ethnic group based on the parameter estimates in Model 2 in Tables 4 and 5. The predicted probability is calculated for an individual aged 25 years old in 2001 keeping other characteristics at the baseline (for categorical variables) and at the average (for continuous variables). Using children of two white parents as a reference group, we then calculate the percentage points difference in the probability of attaining a degree qualification and being in employment between white children and children of each particular ethnic group. (The predicted probabilities of attaining a degree qualification and being in employment are shown in Appendix A). Figures 1 and 2 present a gap that each ethnic group differs from whites in the probability of attaining a degree qualification and being in employment respectively.

Figures 1 and 2 show that controlling for parental socioeconomic and demographic characteristics and geographical location, the distribution of the educational attainment and labour market participation of children of two ethnic minority parents in coethnic unions is quite similar across ethnic groups. Compared to children of two white parents, those with two ethnic minority parents are more likely to have a degree qualification but less likely to be in employment. The likelihood of attaining a degree qualification is particularly high for Chinese and other ethnic as well as for Indians and Pakistanis & Bangladeshis. Meanwhile, the likelihood of being in employment for Black Caribbean and Black African is relatively distinctively lower than other groups.

For all groups apart from mixed White-Black Caribbean, mixed ethnic children appear to have lower chance of attaining a degree qualification than their peers with two ethnic minority parents in a coethnic union. Similarly, apart from mixed White-Chinese and mixed White-other ethnic, the former have higher chance of being in employment than the latter. The educational attainment and labour market participation patterns of children of interethnic unions in general resemble those of children of two white parents more than children of two ethnic minority parents.

Figure 1: Gap in predicted probability of attaining a degree qualification between White and different ethnic groups
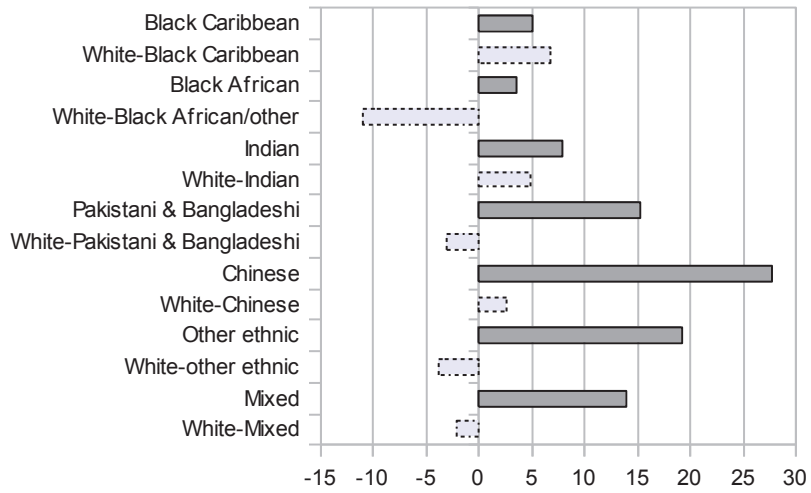
Source: ONS LS (1991; 2001).

Figure 2: Gap in predicted probability of being in employment between White and different ethnic groups
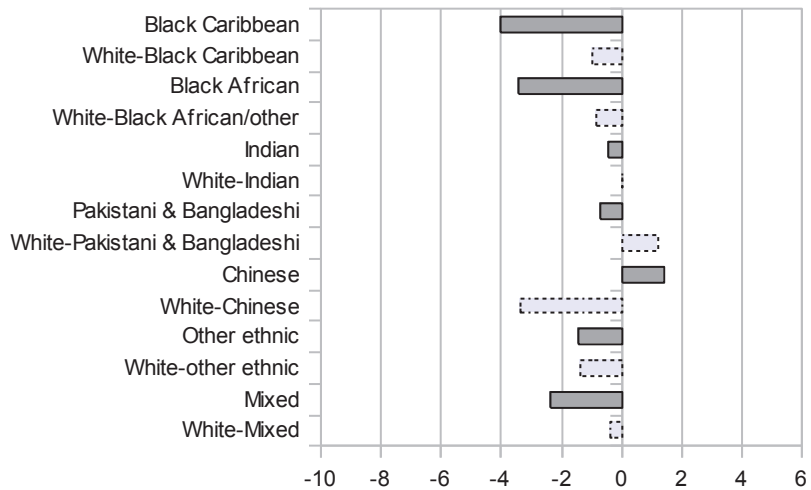
Source: ONS LS (1991; 2001).

5. Discussion and Conclusions

This paper aims to provide new empirical evidence on socioeconomic outcomes of children of interethnic unions using nationally representative sample and taking into account parental and geographical characteristics which could affect the outcomes. The descriptive results show considerable differences in educational attainment and labour market participation patterns between ethnic groups and parental union types. The initial findings nevertheless show that mixed ethnic children do not necessarily have worse educational and labour market outcomes than children of coethnic unions.

Since socioeconomic background of parents differ substantially between ethnic groups and partnership types, it is important to take parental characteristics into account when considering children's educational and labour market outcomes. Likewise, the characteristics of the area where one lived could also play a role in socioeconomic attainment. Taking these characteristics into account, we find that in general the chance of attaining a degree qualification of mixed ethnic children is lower than that of their counterparts with two ethnic minority parents. This could imply that having multiple ethnic identities lead to disadvantages in schooling success. The educational outcomes of mixed White-Black African & Black other support this argument. However, if this is true, we should have observed much poorer educational outcomes of other mixed ethnic groups as well but we did not. Moreover, if the 'marginal man' thesis suggested in Hypothesis 2 is valid, we should also have found that mixed ethnic children have the lowest rates of labour market participation but again our results do not point to this direction. Thus, using educational attainment and labour market participation as measures of socioeconomic outcomes, we do not find evidence that children of interethnic unions are disadvantaged.

With respect to the first hypothesis which predicts that children of interethnic unions with one white parent and one ethnic minority parent have better socioeconomic outcomes than children of two ethnic minority parents in a coethnic union, we find mixed results on this regard. Mixed ethnic children have lower educational attainment but higher labour market participation rates than their peers with two ethnic minority parents. These results could be interpreted as the following.

First, while it is expected that, benefiting from social and cultural capital of their native parent, mixed ethnic children would have better socioeconomic outcomes than their peers with two ethnic minority parents, the former actually have lower chance of attaining a degree qualification than the latter. Our first hypothesis thus does not hold for this particular outcome. Nevertheless it should be noted that children of two white parents themselves have lower rates of attaining a degree qualification than children of two ethnic minority parents. The educational attainment pattern of mixed ethnic children seems to converge to the pattern of their peers with two white parents. As a matter of fact, in the UK, it is commonly found that most minority ethnic groups are more likely to have a higher qualification than the native whites (Modood 2005). This could be because ethnic minority families especially South Asians and Chinese place a high value on education and they hold high aspirations for social mobility (Ahmad 2001; Anwar 1998; Basit 1997; Francis and Archer 2005; Pang 1999; Woodrow and Sham 2001). Meanwhile, this distinctive cultural value is less emphasised in an interethnic family resulting in mixed

ethnic children having similar educational outcomes to children of two white parents and poorer educational attainment than their counterparts with two ethnic minority parents.

Second, the evidence that children of interethnic unions have higher chance of being in employment than children of two ethnic minority parents partially supports our first hypothesis. The former have fairly similar rates of labour market participation to their white peers. This finding suggests that mixed ethnic children might benefit from social networks and resources of their native white parent in getting a job in a similar manner with their peers with two white parents. In the UK, it is found that despite their relatively high educational qualifications, members of minority ethnic groups remain disadvantaged in the labour market. Heath and McMahon (2005) explain that the difficulty in achieving socioeconomic mobility for ethnic minorities might due to the lack of the right kind of social capital useful for advancing in the host country labour market. Accordingly, concerning mixed ethnic children, this labour market disadvantage is reduced because their native white parent enhances their social and cultural resources which their ethnic minority parent cannot provide.

With respect to the third hypothesis, although there is a variation in the education and labour market attainment of mixed ethnic children depending on which outcome and which ethnic group of an ethnic minority parent is being referred to, a general pattern found is that they resemble children of two white parents than children of two ethnic minority parents. In some cases, namely, educational attainment of White-Indian and labour market participation of White-Black Caribbean and White-Black African, the outcomes of mixed ethnic children are in-between those of children with two white parents and those of children with two ethnic minority parents.

Our data does not allow us to further investigate why mixed ethnic children resemble children of two white parents more than their peers with two ethnic minority parents. Based on previous literatures, there are two explanations for this finding. First, based on the classical assimilation theory which assumes that longer the residence in a host country, the closer the characteristics of immigrants to the natives (Gordon 1964), growing up with a native white parent facilitates the assimilation process of mixed ethnic children. Mixed ethnic children acquire similar socioeconomic positions to their peers with two white parents because their native white parent acts as a bridge to host society culture, language and social networks, a link which children of two ethnic minority parents do not have.

Second, the socialization of mixed ethnic children is influenced not only by their native white parent but also by their intermarried ethnic minority parent. Interethnic partnership does not occur at random. It is found that ethnic minority members who are in an interethnic union with a native partner are more likely to be those with high educational qualifications, born or live for a longer period in a host country and living in a non-ethnically segregated residential area (Muttarak 2010; Muttarak and Heath 2010). In other words, ethnic minority parents who are in an interethnic union are fairly socioeconomically integrated in a host country. Accordingly, their parenting practices including social and cultural capital resources might not necessarily be similar to their non-intermarried ethnic minority counterparts. Mixed ethnic children thus resemble their peers with two white

parents because they grow up not only with one white parent but also with one highly integrated ethnic minority parent.

To our knowledge, this study is the first to provide empirical evidence on both educational attainment and labour market outcomes of children of interethnic unions. As our results show, it is important to investigate both outcomes because in the UK (and also in several other Western societies) while the second generation generally have better educational attainment than the natives, they remain disadvantaged in the labour market. Our empirical analysis suggests that mixed ethnic children overcome this labour market disadvantage faced by children of two ethnic minority parents. Nevertheless, we are not able to explore the underlying mechanisms explaining why mixed ethnic children achieve educational and labour market outcomes similar to their native white peers. This requires data that contain information on parenting practices, parents' social networks and parental-child relationship to further investigate the processes through which both native and ethnic minority parents transmit their human, cultural and social capital to their children.

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Appendix A: Predicted probabilities of attaining a degree qualification and being in employment in 2001

	% Having degree qualification	Δ from White	% Being in employment	Δ from White
White	22.6	-	97.8	-
Black Caribbean	27.6	5.0	93.8	-4.0
Black African	26.1	3.5	94.4	-3.4
Indian	30.5	7.9	97.3	-0.5
Pakistani & Bangladeshi	37.9	15.2	97.0	-0.7
Chinese	50.2	27.6	99.2	1.4
Other ethnic	41.9	19.3	96.4	-1.4
Mixed	36.6	14.0	95.5	-2.3
White-Black Caribbean	29.3	6.7	96.8	-1.0
White-Black African/other	11.6	-11.0	97.0	-0.8
White-Indian	27.4	4.8	97.8	0.1
White-Pakistani & Bangladeshi	19.5	-3.1	99.0	1.2
White-Chinese	25.2	2.6	94.4	-3.4
White-Mixed	20.5	-2.1	97.4	-0.4
White-other ethnic	18.7	-3.9	96.4	-1.4

Source: ONS LS 1991 and 2001.

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