

# **Fertility by ethnic and religious groups in the UK, trends in a multi-cultural context**

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Presented at the IUSSP International Population Conference, Marrakech, 2<sup>d</sup> of October, 2009  
*Draft paper, please do not cite without permission*

## **Summary**

Family planning involves a number of personal, socio-cultural and possibly religious preferences that impact on fertility rates. Differences in fertility rates between ethnic groups in immigrant countries are not well understood and there is scarce information on fertility rates between religious groups, partly because few data is available. Here we report recent trends in total fertility rates (TFR) of mothers in the UK belonging to the major ethnic and/or religious groups. TFR were estimated based on the cross sectional Labour Force Survey in the UK, applying reverse survival techniques. A rapid and continuing decline of TFR for the Pakistani and Bangladeshi groups since 1987 support the idea of fertility convergence across ethnic groups in the UK although some differences remain between groups. Overall fertility of foreign-born women is higher than that of UK-born women. However, the proportion of immigrants and the level of fertility in the country of origin may not fully explain the observed differences across ethnic groups. Cross-analysis of fertility by ethnic and religious belonging may suggest overall decreasing influences of both cultural traits in shaping fertility over time in the UK multi-cultural context.

## **Introduction**

Fertility rates differ significantly between different countries due to various economic, social, political and cultural factors. A multi-cultural society is therefore likely to show a variety of fertility behaviour. Ethnic and religious composition of the UK population has become increasingly diverse since the Second World War and the rise of immigration from New Commonwealth countries favoured by the decolonisation process and post-war reconstruction creating job opportunities in Britain. Black Caribbean – then called West Indian - came mainly over the 1950s to the 1960s. They were joined by a flow of male workers from the Indian sub-continent (Ballar, 1990; Peach, 1996). The demand for labour slowed dramatically by the late 1960s and more restrictive immigration laws were introduced in 1962. The immigrants had to choose between staying or returning to their country of origin taking the risk of not been able to migrate again to the UK. Many chose to settle and, in the late 60s, immigration was mostly that of dependants (mainly children and women) from the Caribbean and India. The Indian community grew further with the arrival of Indian families, the ‘twice migrants’, expelled from their East African country of settlement in the 1970s, following the post-colonial wave of ‘Africanisation’, especially in Uganda and Kenya

(Brown, 2006). Family reunion started later for the Pakistani and even more for the Bangladeshi (Berrington, 1996). Immigration from Black Africa has increased in the last decades (Daley, 1996; Milton and Aspinall 2009). In the most recent years immigration from increasingly diverse countries of origin have been recorded, including a growing flow of migrants from the European Union's newest members (Vertovec, 2007). Emigration from the UK is thought to be relatively important (even if quantification is very challenging) and a large part of these emigrants are probably White British. As a result of past and current migration flows the population of the UK has become ethnically more diverse (Table 1).

**Table 1 Ethnic composition of the UK population, 2001**

Ethnic group	Population	% of total UK population
White British	50,366,497	85.7
White Irish	691,232	1.2
White Other	3,096,169	5.3
All Mixed	677,117	1.2
Indian	1,053,411	1.8
Pakistani	747,285	1.3
Bangladeshi	500,000	0.8
Other Asian	247,644	0.4
Black Caribbean	565,876	1.0
Black African	485,277	0.8
Black Other	97,585	0.2
Chinese	247,403	0.4
Other	230,615	0.4

Source: Census 2001

A number of studies have shown fertility differential by ethnic groups, including published estimates up to 2001 in the UK, questioning the possibility of converging trends in a near future (Rees, 2007, Large, Gosh and Fry, 2006, Coleman and Smith, 2005). Further, it has been suggested that religious affiliation, as opposed to non-religious, may support higher fertility rates through norms supporting childbearing. Fertility differences have also been reported between religious communities in Western Countries, including Austria (Goujon et al. 2006), part of Europe (Kaufman, 2007) and USA (Freska and Westoff, 2006). How these factors combine and interplay to contribute to fertility is of considerable debate and interest (McQuillan, 2004). One approach to dissect these factors is to study fertility rates in a multi-cultural context over time. Cultural plurality results from past and current migration waves and fertility rates are likely to be influenced by fertility characteristics in the country of origin. Therefore, family size preference may be a persistent cultural trait in immigrant communities and possibly their descents. However, economic, social, cultural, and political parameters in the country of settlement may differ and influence childbearing behaviour presumably more or less depending on the duration of the settlement since migration occurred. No fertility estimates by religious (or non) categories are currently available and estimates by ethnic groups need to be updated. This research aims to produce fertility

estimates by ethnic and religious groups in the UK applying a refined Own Child methodology (Dubuc, 2009) and analyse their trend over time (1987-2006). Distinction between overall UK-born and foreign-born mothers is further investigated.

## **Methodology**

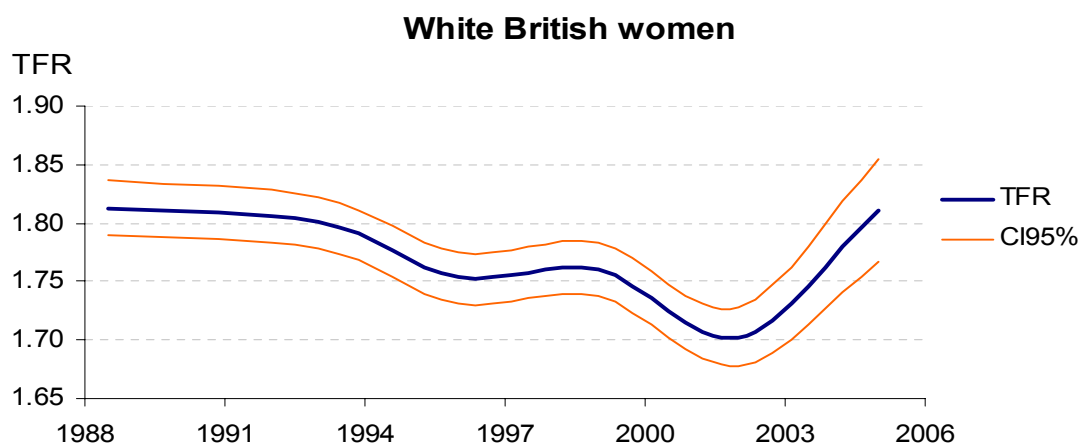
No birth registration by ethnic and religious groups exists for determining TFR (as defined by the sum of 1 year period Age Specific Fertility rate, ASFR, which is the number of births by women aged  $x$  / Total women of age  $x$ ) of a population. The only available source, the ONS-Longitudinal Study, based on 5% census sample does not allow detailed estimates for small groups. Indirect methods are needed. Commonly the census data has been used to estimate the Total Period Fertility Rate (TFR) by ethnic groups (e.g. Rees, 2005, 2008; Large, Gosh and Fry, 2006). However, inter-census data estimates allowing detecting trends of TFR between ethnic and religious groups remains challenging. There is a clear risk of increasing bias when using the previous census data, in part due to the difficult quantification of net migration flow in population forecasting based on the latest census data. Using other sources like the annual Labour Force Survey, which includes variables on ethnicity and religion, has first been proposed by Berthoud to study teenage births by ethnic groups in the UK and used by Coleman and Smith (2005) to produce estimates by ethnic groups up to 2001.

Here, data from the cross sectional Labour Force Survey (LFS) are used together with the Own Child Method (Cho, Retherford and Choe, 1986) to estimate ASFR and TFR for ethnic and religious groups. The Own-Child method is a reverse survival technique. The method used here amalgamates data from several LFS annual surveys (2001-2006) retro-projected over 15 years, significantly increasing sample size. 0-14 years old children are matched to mothers within households allowing reconstructing birth to mother of fertility age (15-49), and by age of the mother, up to 15 years prior to the survey. In order to improve the accuracy of the previously applied method by Coleman and Smith (2005), mortality rate corrections were introduced in the reverse survival table and instead of matching children to the larger household category, they were matched by family unit (For detailed presentation of the method used see Dubuc, 2009, Dubuc and Haskey, forthcoming). Both refinements correct for otherwise modest underestimations of TFR. Comparisons of the overall trend in TFR produced for all women in the UK using LFS-OCM with estimates from the ONS (Office for National Statistics), indicated consistency between trends and overall good agreement (largest differences <4%) (Dubuc, 2009; Coleman and Dubuc, forthcoming).

## **Results-discussion**

The trend in the TFR of the White British women (Figure 1) reflect the general UK trend well, since about 4 of 5 women belong to this ethnic group. Following a long period of continuous decline the general TFR and the TFR of the White British women have increase in the most recent years (since 2002). Figure 1 shows two years average TFRs. This level of detail was not possible for the minority ethnic groups and 3 average period TFRs have been

calculated instead to provide meaningful trends. Figure 2 shows the Total Fertility Rates (TFR) of the major ethnic groups in the UK, over 1987-1994, 1995-1999 and 2000-2006. Ethnic groups are listed in decreasing numerical order: White British, White Other, Caribbean, Indian, Pakistani, Bangladeshi, Black African and Chinese. Because the White British have recorded the lowest TFR ever in the first years of the 21<sup>st</sup> century and despite an increase in the last 4 years (Figure 1), the average TFR of the White British over the 2000-2006 period shows a slight decline compared to the previous period (Figure 2).

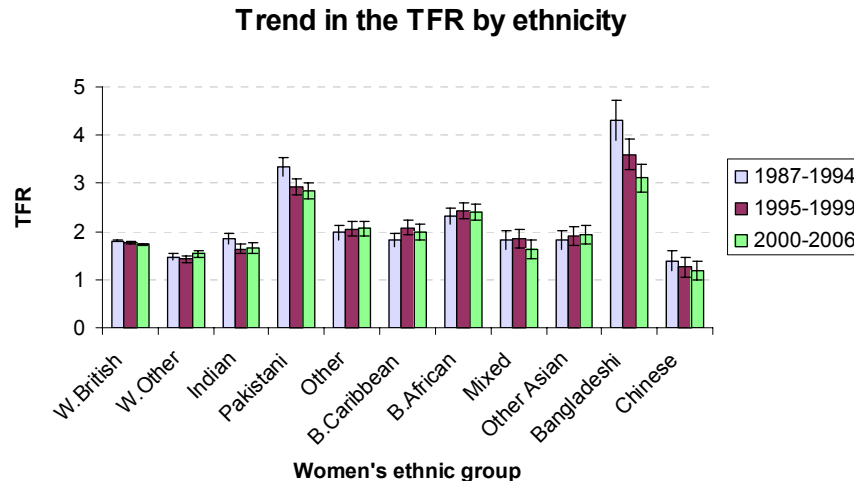


**Figure 1: Trend in three-year average TFR of the White British women, 1987-2006**

Source: Author's estimates based on LFS

Overall we observe converging TFR between the ethnic groups (Figure 2). This is supported by a decreasing coefficient of variation (standard deviation/mean) of the average TFR over the 3 periods: from 0.35 in 1987-1994 to 0.27 in 1995-1999 and 0.24 in 2000-2006. The TFR of the Bangladeshi and Pakistani women, initially relatively very high, record the most striking decrease and largely contribute to the overall convergence of fertility level across ethnic groups. However, the TFR for these two groups remain higher than those of the other ethnic groups. The TFR of the Indian ethnic group has decreased below that of the White British group. This appears to be especially due to a very low fertility rate for the UK-born mothers of the Indian ethnic group (estimated 1.44 over 2001-2006). This may reflect an increase in the educational and socio-economic status of Indian women, especially from the second and higher generations in the UK. This results may support the minority status hypothesis according to which minority groups with ambitious socio-economic aspirations choose fewer children compared to the majority population (Goldscheider and Uhlenberg, 1969; Abbasi-Shavasi, 2000). The estimated fertility of the White Other and Chinese women is also below that of the majority ethnic group - the White British - and continuously decreasing for the latter to reach 1.2 in recent years. The especially low fertility of the Chinese women may reflect similarly very low fertility in Hong Kong from where a large part of the Chinese early immigration came from. In recent years migration from China was mainly made of students and highly skilled workers. Overall high socio-economic and

educational profile may combine with the minority status effect to explain the fall of fertility of the Indian, White Other and Chinese women below the White British.



**Figure 2: Trend in TFR by main ethnic group, 1987-2006\***

Source : Dubuc and Haskey, forthcoming. Author's estimates based on LFS data.

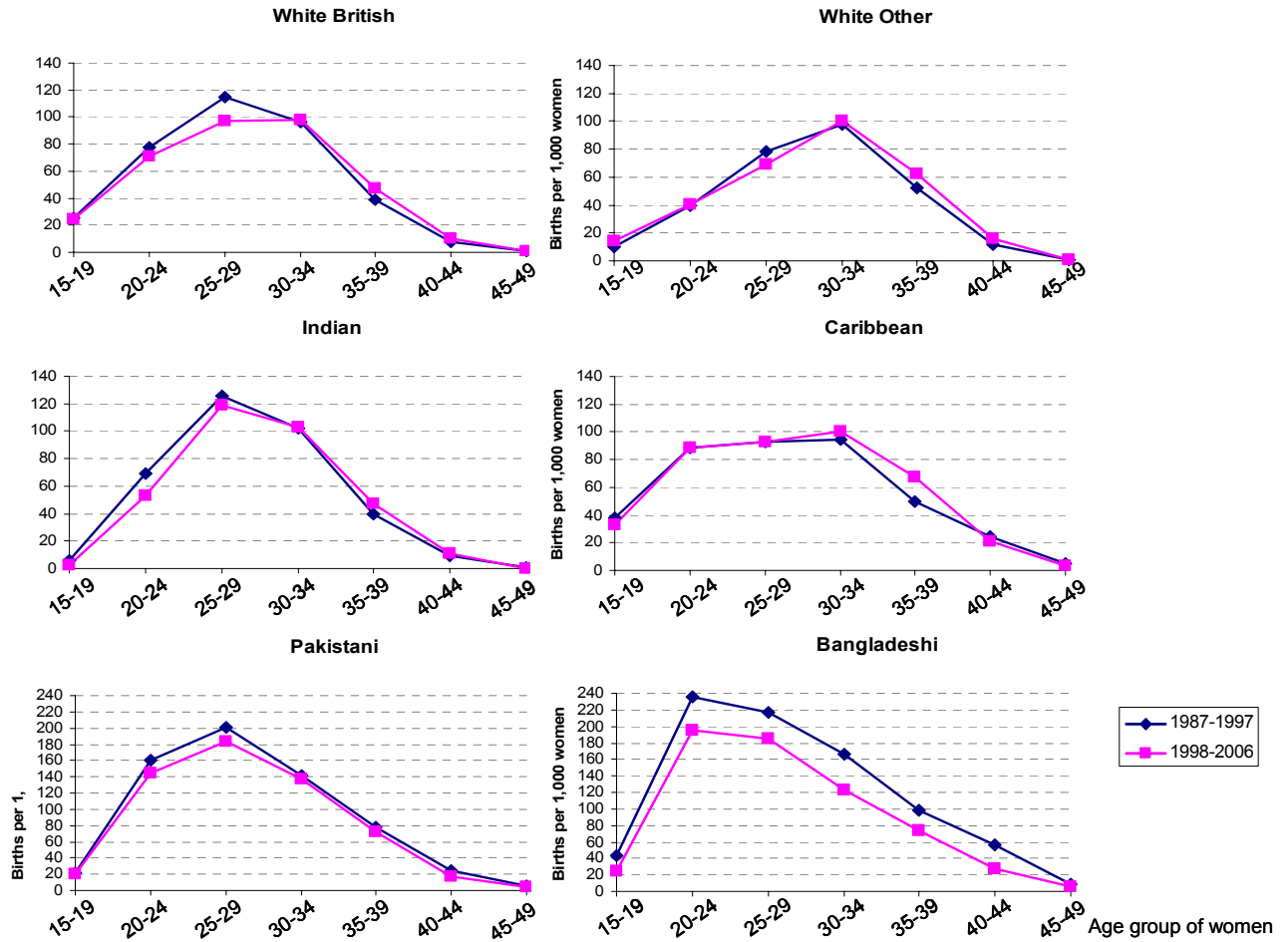
\*Average periods fertility rates only are produced. Small numbers for some ethnic minorities do not allow more detailed trend.

Ethnic categories are sorted by decreasing frequency of the number of women aged 15-49 in 2006 LFS, 3d quarter (White British are 86.6%, White Other 5.3%, Indian 1.7%, Pakistani and Other 1.2%, other groups are about 0.5% and below of the sum of women with an ethnic group. Ethnicity was not stated for 6.2% of women)

Figure 3 shows the 5 years ASFR of women belonging to the main ethnic groups over the two successive periods 1987-1997 and 1998-2006. With a peak of childbearing in their late 20s, the childbearing age profile of the Indian women is the closest to the White British women, albeit with less teenage births for the former. White other women tend to have their children later than the other groups. In the case of the Caribbean women young age childbearing appears to combine with a relatively high ASFR for women in their 30s and may evidence the co-existence of two markedly different social sub-groups. The higher fertility of the Pakistani and Bangladeshi women compared to the other groups is especially marked for women in their early 20s.

Comparison of ASFR for the two successive periods shows a decrease of fertility for White British women in their 20s and signs of delayed childbearing. This trend is also apparent for the White Other and the Indian women. Results suggest that Black Caribbean women tend to have more children in their 30s in recent years, at a level comparable to the White Other.

In contrast, no sign of postponement is apparent for the Pakistani and Bangladeshi women. The decrease in the TFR of the Bangladeshi women is due to a decrease in the fertility of women in all age groups. The decrease in the TFR of the Pakistani group mostly results from a decrease in ASFR for women in their 20s.



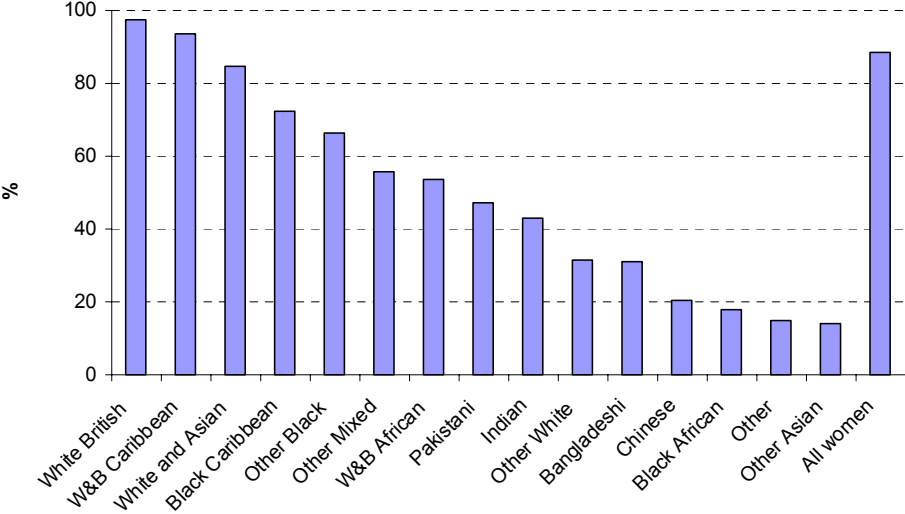
**Fig 3: ASFRs of women by (selected) ethnic group, 1987-2006.**

Source: Author's estimates based on LFS data.

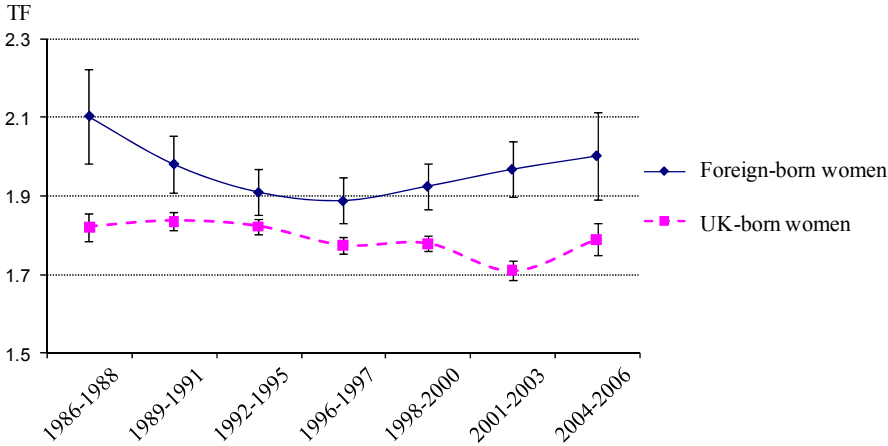
The scale of the Y axis (number of births per 1,000 women) is similar for the White British, White Other, Indian and Caribbean women (up to 140) but different from the scale used for the Pakistani and Bangladeshi women (up to 240) to balance comparability and readability.

The proportion of immigrants, defined as foreign-born, vary across ethnic groups (Figure 4) and over time. In recent years, apart from the White British, Black Caribbean and women of Mixed origin - largely representing the first generation of the mixed ethnic origin group - were mostly born in the UK. For the later group it is especially true for the Mixed:White and Black Caribbean, and Mixed: White and Asian groups. Due to small sample numbers, a comparison of the TFRs between the UK-born and the foreign-born sub-populations of each ethnic group was not possible. However the trend in the TFRs for all women, by their country of birth - UK or non-UK - (see Figure 5) shows the contribution of immigrant women (meaning first generation in the UK) to the TFR of the UK population. Immigrant women mainly belong to one or other of the different ethnic minorities (about 82 % of non UK-born women aged 15-49 in 2002-2006 were not White British).

Overall, the fertility of immigrant women has consistently been higher than that of UK-born women. When immigration flow has dwindled (e.g. the Caribbean since the 1970s) or even in the case of stable net migration flows overtime, the proportion of foreign-born would decrease and is likely to lower the overall TFR in the near future.



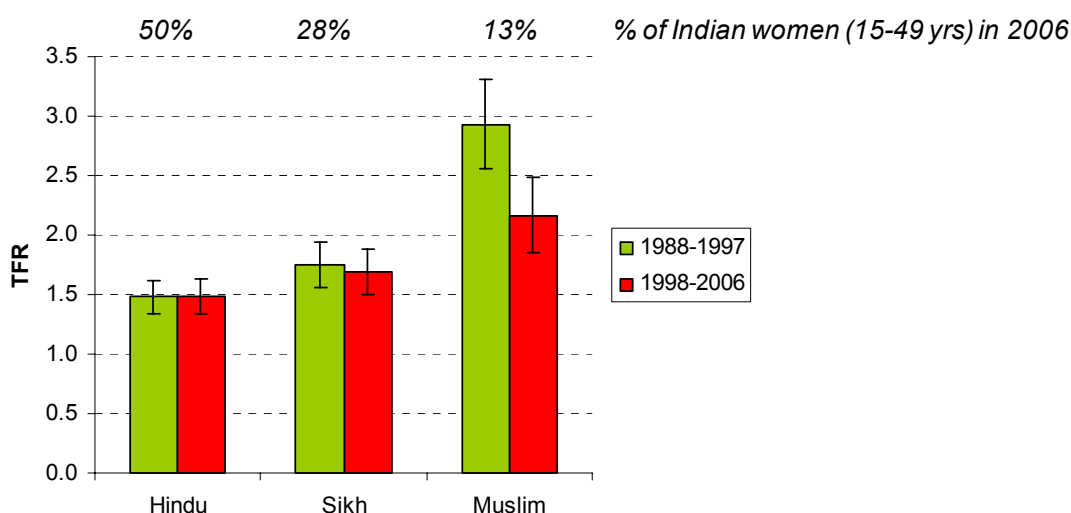
**Figure 4: Women aged 15-49: proportion of UK-born by ethnicity, 2002-2006**  
LFS data, 3<sup>rd</sup> quarter 2002-2006.



**Figure 5: Trend in the TFR of UK- and foreign born women in the UK, 1987-2006**  
Source: Dubuc and Haskey, forthcoming. Author’s estimates based on LFS data.

TFR and ASFR results suggest some convergence in reproductive behaviour across ethnic groups. However some non negligible differences remain. Fertility is likely to vary within ethnic groups due to a variety of socio-economic and culturally specific factors. The method applied to produce fertility estimates does not allow taking into account all these factors to analyse the determinant of fertility. This is because estimates on the basis of pre-selected characteristic(s) of the individuals present in the survey can not be linked retrospectively to other survey data. However, when numbers permit, it is possible to produce fertility estimates by sub-groups within a particular ethnic group. This is the case for the Indian ethnic group, allowing exploring differences between religious sub-communities. The TFR of the Indian women was calculated for the 3 main religious sub-groups of Indian women (Fig 6). In accordance with other findings in India (Dharmalingam and Morgan, 2004) the Hindu group has the lower fertility while the highest was recorded for the Muslim Indian women. This suggests an impact of religion on fertility, unless differences across religious affiliation would mainly reflect other determinants of fertility that vary across religious groups.

Figure 6 shows the changes in TFR between the period 1987-1997 and 1998 -2006 by religious affiliation. A recent decrease in the TFR of the Muslim minority is apparent. No such decrease is recorded when all Muslim women in the UK are taken together (whatever their ethnic group is). The significant drop in TFR for the Indian background Muslims compared to all Muslims (table 2) suggests that in recent years, being of Indian ethnicity would have a greater impact on fertility/ reproductive behaviour than being Muslim. However, ethnicity per se may not be the (only) cause for the decreasing TFR for Indian Muslims in the UK and rather express the impact of socio-economic differences on fertility across groups. For instance in India, the average larger family size of Muslims compared to Hindu is attributed, at least in part, to a lower socio-economic status of the former and including reduced access to family planning (Jeffery and Jeffery 2006).



**Figure 6: Average period TFR for Indian ethnic group by religious denomination\***

\*Only the main religious groups are represented

Source: Author's estimates based on LFS data



**Table 2: Comparison of TFR for All Muslim with Indian Muslim, 1988-2006**

<b>Period</b>	<b>All Muslim</b>	<b>Indian Muslim</b>
1988-1997	3.1	2.9
1998-2006	3.0	2.2

### **Conclusion**

TFR and ASFR results suggest some convergence in reproductive behaviour across ethnic (and religious) groups, while differences remain. This work constitutes the first step, necessary to understand the influence of religion and cultural background on fertility. Fertility and childbearing behaviour may also be seen as a marker of cultural identity and its study should help to better understand how a multi-cultural society evolves.

### **Acknowledgement**

I am grateful to John Haskey for his valuable comments. I am thankful to D. Coleman for stimulating discussions. This work was supported by the Economic and Social Research Council, Grant RES-163-25-0049 to Sylvie Dubuc.

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