CASTE/ETHNIC DIFFERENTIAL FERTILITY TRANSITIONS IN NEPAL: WHOSE FERTILITY DECLINED FASTER?

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Differential fertility is one of the interests for demographers. This study analyzes the fertility behaviour of different caste/ethnic groups of Nepal for the period of 1994 to 2004 using the data from Demographic and Health Surveys. In this article, caste/ethnic groups have been categorized into Hill Hindu, Janajaties (hill ethnic groups), Terai Hindu, Newar, Muslim and Dalits. The results show that fertility decline has started earlier among Newars, followed by Hill Hindu. However, Hill Hindu and Terai Hindu had similar fertility levels in 1996, due to a slow decline in Terai Hindu, it is still higher for them. Fertility transitions in Janajaties started late but the rate is fastest among all the ethnic groups. Fertility decline in Muslims and Dalits started, in fact, after mid 1999. Hence, Newars are the first and Muslims and Dalits are the last ethnic groups to experience fertility transition. The decline in fertility during the period mid 1999 and mid 2004 is faster than in mid 1994 to mid 1999. Demographers have acknowledged the decade-long political insurgency (1995-2006) as the main cause of fertility transition for the period of mid 1999- mid 2004. If it is true, Nepal has a risk of facing Baby-Boom in near future as elsewhere in the global demographic history in the period after the conflict. But if the current trend of fertility continues, Newars will be the first ethnic group to reach replacement level fertility, followed by Hill Hindu and Janajaties.

INTRODUCTION

Differential fertility draws attention on the fertility differences between sub-groups of population often classified by socio-economic status, religion, education, ethnicity, occupation, rural/urban residence (UN, 1973; Weeks, 1978; Bhende and Kanitkar, 1996; Karki, 2003) and spousal occupation. Standing on the arguments of earlier scholars (UN 1973, op. cit) - Davis and Blake (1956), Phichat (1967), Lorimer (1954), Freedman (1961/62) - and revaluating the contemporary studies - Guinnae et al. (2002), Peng (2002), Retherford et al. (2005) - ethnic differential in fertility behaviour is continuously successful to draw attention of demographers to date. It is obviously essential to consider differential fertility by caste/ethnicity in multi-ethnic countries like Nepal.

Many developing countries, including Nepal, have entered in fertility transitions by early 1990s. The complexity of the fertility transition does not allow for easy generalization. However, it is apparent that prime determinant of fertility decline lies in social development, particularly the level of women's education and autonomy, as well as commitments by the governments to provide effective family planning programmes. The process of fertility decline is propelled by the transmission of information and ideas as regards the regulation of fertility and the use of modern contraceptives (Gubhaju and Durand, 2003). A study among the ethnic groups of Sri Lank shows two factors that have directly contributed to fertility decline among the ethnic groups are the increase in the average age at marriage and the increasing use of contraception (Puvanarajan and De Silva, 2001). However, a study in Bangladesh points the role of social interactions (social change), mobility and communication for declining fertility (Marten, 2002). Nepal has been experiencing a fertility transition from the last decade or little earlier, though started late compared to other developing Asian countries. But the reasons of fertility decline are largely concentred to increasing age at marriage and wide acceptance of contraceptives. The

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specific reasons are inadequately discovered, particularly, when the analysis is decomposed to ethnic differential.

Though, the influence of culture and caste/ethnicity on fertility behaviours is admitted by many social demographers, the analysis is limited by data limitation, classification inconsistencies, among others. Despite the improvement in fertility data, estimation of ethnic differential in fertility remains challenging or largely unavailable due to lack of plausible information on fertility behaviour in Nepal. None of the Nepal Demographic and Health Surveys (DHS) or censuses has attempted to provide information on ethnic differential in fertility, though there are attempts to elucidate geophysical and socio-economic differential of fertility. The reasons for not providing the ethnic differential in fertility owe to primarily two reasons - i) insufficient sample size and ii) inconsistent classification of ethnic group across the surveys. The later cause seems to be more dominating.

Despite acknowledging the differential fertility by caste/ethnicity, the study to elucidate ethnic differential is limited, particularly in Nepal. There are few studies conducted concentrating on specific ethnic community. For example, Macfarlane (2003) analyzed fertility behaviour of *Gurung* community and Subedi (2006) on *Dura* community. Macfarlane's study dates back to 1970s while Subedi's study is recent. A change in social and cultural structure of ethnic community leading to change (decline) in fertility behaviour is acknowledged by the authors.

The decline in total fertility rate of Nepal from 4.6 in 1996 to 3.1 in 2006 (MoHP, New ERA, Macro International, 2007) requires to be sustained by the decline in all ethnic groups. However, the decline may not be necessarily uniform. The argument for differential fertility by caste/ethnicity is valid because of the different socio-economic, cultural and demographic practices each ethnic group is characterised with. In fact, caste/ethnicity comprises a set of factors, which distinguishes each caste/ethnic group from another, has close influence with fertility behaviours. As like the fertility differential is based on the various background characteristics of population, caste/ethnicity is one to consider seriously.

DATA AND METHODS

This paper attempts to explain ethnic differential in fertility behaviour using fertility data collected by three consecutive Nepal Demographic and Health Surveys (NDHS) -1996, 2001 and 2006. For the purpose of making consistent and comparative analysis, the 100 ethnic groups enumerated by the National Census 2001 have been grouped into 6 different categories and modified on the basis of classification made by Dahal (2003). Dahal has classified ethnic groups into five broad cultural groups i) the caste-origin Hindu group, ii) the Newar, iii) Janajaties ((excluding Newars), iv) Muslim or Musalman and v) Others. But making some distinct analysis and identifying the ethnic differential as possibly into smaller section in this study the ethnic groups are regrouped into six different groups as i) the caste origin Hill Hindu group, ii) the caste-origin Terai Hindu group, iii) Janajaties or Nationalities (Hill and Terai origin), iv) the Newars, v) Muslim or Musalman, vi) Low caste or untouchable, often called in local term Dalit (Hill and Terai Origin) and the rest into 'Others' category which is not included in analysis. While regrouping the classification provided by National Dalit Commission, Nationalities Association and used by Dahal (2003) are consistently followed.

A few discrepancies are observed while categorizing the ethnic groups. For example, the NDHS 1996 enumerated 10 different ethnic groups and rest were grouped into 'other hill origin' for those originating from hill and into 'other all Terai' for Terai origin ethnic group. The number of

ethnic groups enumerated increased to 55 in the year 2001 and further to 74 in 2006. The reason for increasing number of ethnic groups enumerated in each successive survey is attributed by the increasing ethnic awareness which disaggregated the 'other' group into respective ethnic group of respondents. In order to include all caste/ethnic groups in analysis, classification is done cautiously using different sources to identify and locate each caste/ethnic group to the particular broad category it belongs to. For those classification is either not clear or difficult, to avoid the misclassification and distortion in analysis, are grouped into 'Others' category and duly excluded from analysis as they have relatively smaller size. The discrepancies produced by the omission of the caste/ethnic group from the analysis due to misclassification are cautiously acknowledged and suggested for further investigation. The sampling distribution of ethnic groups for three consecutive surveys is displayed in Table 1.

This study is based on three NHDSs - 1996, 2001 and 2006 which provide fertility data for three years preceding the survey in other to include more number of births and obtain fairly accurate fertility level and pattern. Using the births preceding three years of the survey and women's exposure years for the same three years, fertility schedules for all ethnic groups included in the study are calculated for one and half years preceding the survey for three points of time - 1996, 2001 and 2006. Period age-specific fertility schedules and TFRs calculated to determine the levels, trends and patterns of fertility for all ethnic groups. Finally, intra and inter ethnic groups comparison and comparison with national average is done for concluding.

Table 1: Sampling distribution of interviewed women in the age group 15-49 by ethnic groups for three surveys - 1996, 2001 and 2001, Nepal

Ethnic groups	NHFS 1996	NDHS 2001	NDHS 2006
Hill Hindu	2,611	2,940	3,976
Janajaties (excluding Newars)	2,467	2,586	3,475
Dalits	1,234	1,218	1,358
Terai Hindu	1,187	1,202	938
Newar	509	424	491
Muslim	421	354	368
Others		2	187
Nepal	8,429	8,726	10,793

Source: Recalculated from NFHS, 1996; NHDS, 2001 and 2006.

FERTILITY LEVELS AND TRENDS BY ETHNIC GROUPS

A sharp decline in fertility is observed in *Janajaties* during the period of June 1994 - June 2004. From as high as TFR[1] 5.2 in June 1994, with an unprecedented decline of about more than 2 births, they have arrived at 2.9 in June 2004, which is lower than the national average of 3.1. The faster decline is observed during June 1999 to June 2004, which is consistent to national trend. Though, additional studies are required whether the decline is justified and sustained, few speculations can be made on the increase in age at marriage,

Table 2: Ethnic differential in total fertility rate, Nepal, June 1994-June 2005

Ethnic groups	NHFS 1996 (June 1994)	NDHS 2001 (June 1999)	NDHS 2006 (June 2004)	% decline June 1994-June 2004
Hill Hindu	4.2	3.7	2.9	31
Janajaties (excluding Newars)	5.2	4.2	2.9	43
Terai Hindu	4.1	4.1	3.6	13
Newar	3.7	3.4	2.4	34
Muslim	5.5	5.7	4.6	17
Dalits	4.7	4.8	4.0	15
Nepal	4.6	4.1	3.1	33

Source: Recalculated from NFHS 1996; NHDS, 2001 and 2006.

[1] All rates refer one and half year preceding the survey date (given).

internal and international migration (voluntary and involuntary), increasing access to contraception and exposure to communication (MoHP, New ERA, ORC Macro, 2007), among others. There are few arguments on the cultural freedom on discussion of sexuality among *Janajaties* which has positively favoured for discussion and use of contraception. As compared to national trend, the decline is contributed by the age group 25 above markedly (Table 2) which can be associated with the wide use of contraception.

However, Newars have consistently lower fertility than the national average and any other ethnic group. Newars' total fertility has reached near about the replacement level. This level is expected because the concentration of Newar is in urban area and they have better socio-economics status than other ethnic groups. The NHDS 2006 shows, though declining, the Muslims have the highest level of total fertility rate which is approximately higher by one and half children than national average. TFRs of Newar, Hill Hindu and Janajaties are lower than the national average whereas Terai Hindu, Dalit and Muslim have higher than national average.

In an average, the TFR has declined by 33 percent between a decade of June 1994 to June 2004. The highest percentage of decline is observed in Janajaties (43%). The decline is slow for Terai Hindu, 20 percent points less than the national average. The decline is consistent between Newars and Hill Hindus whereas the decline is slower for Muslims (17%) and Dalits (15%). Data show that till June 1999, fertility was increasing in Muslims and Dalits which started declining after June 1999 contributing to decline in national fertility level. The reason for slow decline in fertility of Muslims is related to religious traits against the use of contraception and favouring higher fertility. Whilst for Dalits, is attributed to their low level of socio-economic development and large family favouring culture. Karki (1982) argued that poverty is considered to influence people to have large family size (Karki, 2003, op. cit.) which seems true for Dalits where rampant poverty prevails. But, owing to the gradual increase in level of education and increase in the contraceptive prevalence, though poverty is not necessarily declined, fertility transition has started among these high fertility groups.

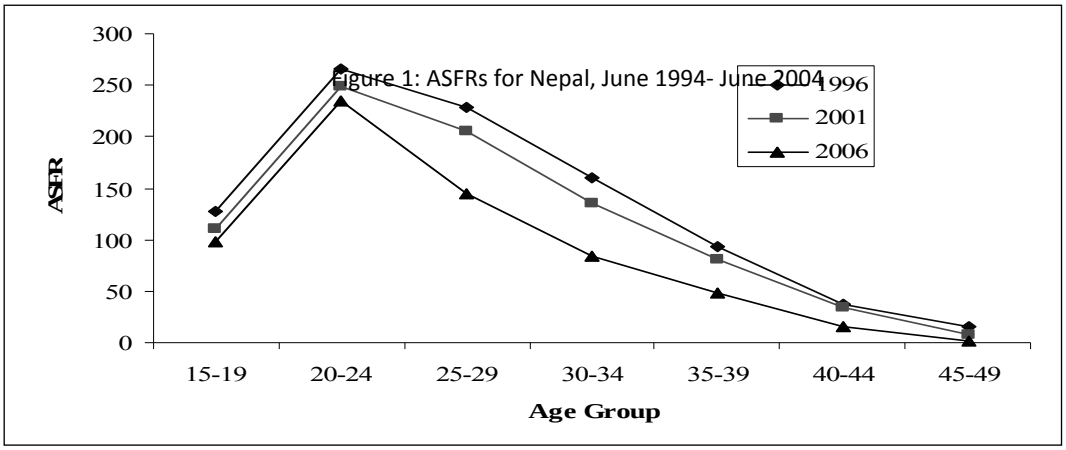


Figure 1: ASFRs for Nepal, June 1994- June 2004

While analyzing the age specific fertility rates, fertility decline is larger for older age cohorts, especially after age 25 (Figure 1). The decline is faster in the second half (2001-2006) for the women aged 25 and above. Following the similar national trend and pattern, ethnic differential in ASFRs is markedly observed. A sharper decline is observed in age group 15-19 for all ethnic groups, except for Terai Hindus, Muslims and Dalits. An increase is observed for Terai Hindus, Muslims and Dalits in the age group 15-19 in mid 2004 than in mid 1999, which lacks sufficient reasons to justify. ASFRs among the age group 20-24 has also increased for Terai Hindu. The convergent relation between Terai Hindus and Muslims thus requires further analysis as both

ethnic groups are dominantly residing in Terai region. Another possible reason for inconsistent fertility trend in the Terai Hindu group may be that some Terai origin ethnic groups are reclassified under other categories - Janajaties and Dalits. Unexpected trend arising from ethno-classification problems are duly acknowledged.

Figure 2: ASFRs of Hill Hindu, June 1994-June 2004

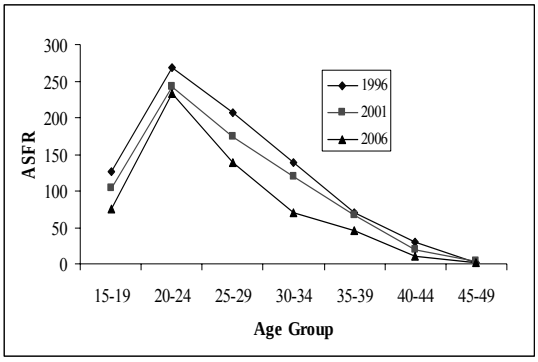


Figure 3: ASFRs of *Janajaties*/Nationalities, June 1994-June 2004

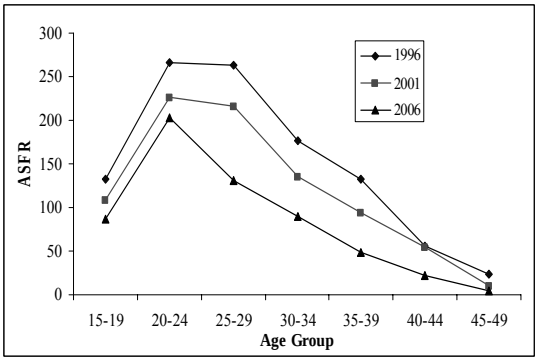


Figure 4: ASFRs of *Tarai* Hindu, June 1994-June 2004

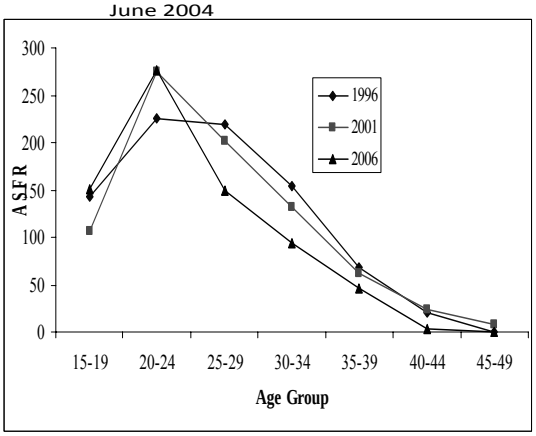


Figure 5: ASFRs of *Newar*, June 1995-June 2004

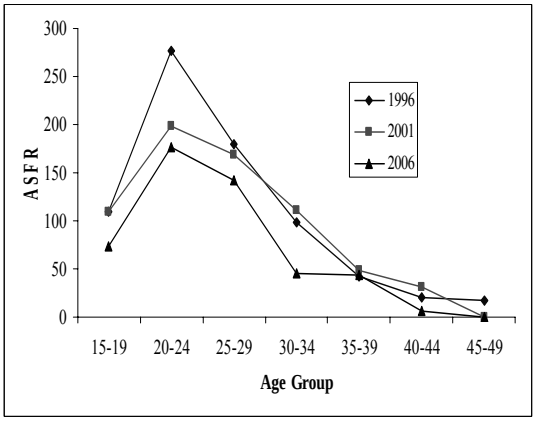


Figure 6: ASFRs of Muslim, June 1994-June 2004

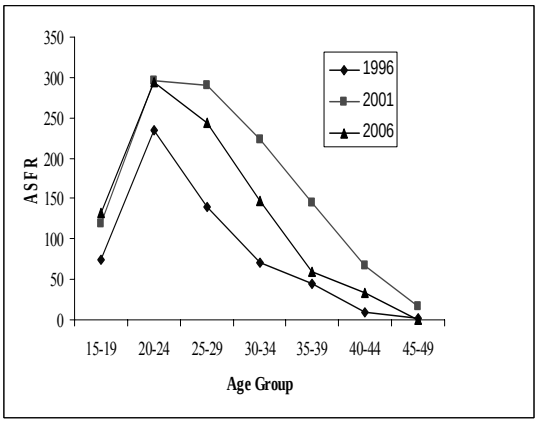
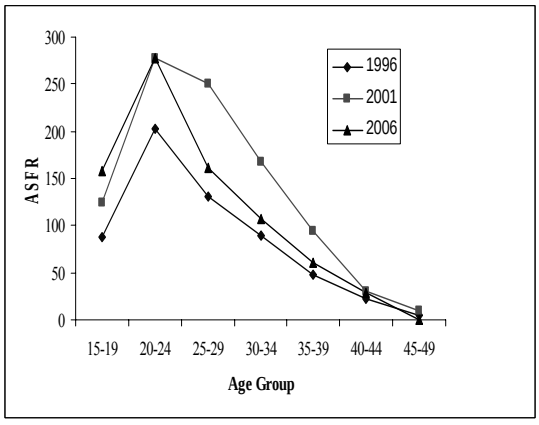


Figure 7: ASFRs of *Dalits*, June 1994-June 2004



Fertility has uniformly declined across the all ages for Hill Hindus, the decline being relatively faster after the age 25 (Figure 2). While for Janajaties, the decline is sustained by women of all age groups. Decline seems more rapid in the age group 25 and above than in any other ethnic groups (Figure 3). Fertility decline in all age groups can cautiously be interpreted to have been sustained move to lower fertility with the obvious reasons of socio-economic, cultural and health improvements. Fertility decline is inconsistent for Terai Hindus up to age 25. After age 25 only a more consistent and expected decline in fertility is observed, the age 25 as in other ethnic groups serves as turning point for Terai Hindus (Figure 4). Unlike the average national trend showing a consistent decline in fertility in all age groups, Terai Hindus and Muslims show fertility is increasing in younger age women while it is sharply decreasing in older age group women. This can be linked to the increasing acceptance of family planning and labour migration of males of higher age groups. The overall declining trend of fertility needs a cautious explanation before reaching the conclusion while the decline in TFR can be considered as an expected glimpse. However, the inconsistent fertility trends among these groups posit several future demographic and socio-economic issues.

Though the fertility level of Newar is lower than national average in all the years of study, the decline is sustained by the increasing age at marriage and decreasing fertility in lower age. The fertility of Newar women in the age group less than 24 has sharply declined in mid 1999 and onwards (Figure 5). The fertility transition in Newar women is sustained by shift in fertility behaviour as due impact of the comprehensive access to education, communication, economic opportunities and increasing contraceptive prevalence.

Fertility behaviours of Muslims and Dalits converge for similar trend. Both groups' fertility increased till mid 1999 and has started declining thereafter. Alike to other ethnic groups, the decline is markedly observed for women aged 25 and above. A cautious analysis is needed for the increasing ASFR in the age group 15-19 for both ethnic groups. However, higher increase is observed for Dalit (Figure 6) women than Muslims (Figure 7). Compared to rapid increase in fertility between mid 1994 and mid 1999, the decline between mid 1999 and mid 2004 is slower for Muslims and Dalits. But the declining trend started from mid 1999, gives a glimpse of demographic transition among these socially, economically and culturally marginalized ethnic groups. The rapid change in social, economic and cultural setting has facilitated the demographic transition in all ethnic groups, especially among those ethnic groups having higher fertility in the recent past.

DISCUSSION AND CONCLUSION

In 1990s, when many developing countries were heading towards low demographic transition with low fertility and mortality, increased life expectancy and better socio-economic performance, Nepal was observing a reduced mortality followed by high fertility, low life expectancy and poor socio-economic performance. Affordability, accessibility, availability, knowledge and awareness of reproductive health services including family planning have made a substantial difference between the people (New ERA, 2006) representing different ethnic and locational characteristics in Nepal. Though, Nepal has observed fertility transition from 1980s, fertility transitions in different ethnic groups correspond to different periods. Fertility decline in Hill Hindus, Terai Hindus, Janajaties and Newars have begun earlier than Muslims and Dalits. Newars are the first ethnic group to contribute for fertility decline having the lowest fertility, followed by Hill Hindus. Though fertility decline among Janajaties started later, the decline is ever faster than in any other ethnic groups during the period of mid 1994-mid 2004. The decline is slowest among the Terai Hindu women in the same period. Fertility continued to increase till

mid 1999 for Muslim and Dalit women. During the period of mid 1999 to mid 2004, TFR of Muslim women declined by 21 percent, while of Dalits by 18 percent. Hence, contribution of three major groups - Janajaties, Muslim and Dalit women- should be duly acknowledged for recent decline of fertility. The NDHS lacks the sufficient reasons for decline in fertility. Except the general reasons attributable to the increasing level of development, specific reasons are missing.

Theoretically, there can be two reasons for fertility transitions - innovation diffusion and adjustment. The innovation/diffusion view argues that the adoption of fertility control within a population represents a new behaviour originating in new knowledge or changes in the moral acceptability of contraception. However, adjustment advocates argue that fertility control reflects couples' rational adaptation to changing economic and social circumstances (Guinnane, Moehling and Grada, 2002). The decline in fertility should be analyzed in response to decline in mortality level, particularly infant and child mortality, increasing life expectancy and improvement in socio-economic indicators. The sociological approach emphasizes the fact the changes must occur in society to motivate people from high fertility to low fertility behaviour (Weeks, 1978). This is particularly true in case of Nepal. Nepal has observed great political and social changes in the previous last decade.

Fertility transitions in Newar women started earlier owing to the cultural diffusion and adaptation which contributed to increase in age at marriage and acceptance of contraception. Given the current fertility trend, Newar women will reach the replacement level fertility earlier. Though, Hill Hindus and Terai Hindus had similar fertility level in mid 1994, fertility of Terai Hindus could not follow the level of Hill Hindus by mid 2004. Fertility transitions in Terai Hindu women remained slowest during the period whilst the fertility continuously declines for Hill Hindu women. The due reason may be that Terai Hindu women are less responsive to the cultural diffusion, adaptation and development. Additionally, prevalence of widespread poverty (though declining) accompanied by unemployment, underemployment and low status of women (New ERA, 2006) are considered to be responsible for slow fertility transition for Terai Hindu women.

The onset of fertility transitions among Janajaties, Muslims and Dalits have contributed to decline in overall fertility rate of Nepal, particularly after mid 1999. The transition is sustained by the decline in fertility of Hill Hindus, Newars and a bit by Terai Hindus. If the current fertility trend of Janajaties continues, their fertility will reach to replacement level earlier than the national target of 2027. But it will take a few more years for Muslims and Dalits to reach replacement level fertility due to the reasons that 1) late start of fertility transitions and 2) slow responsiveness to the cultural diffusion and adaptation.

The largest young population in the demographic history of Nepal is likely to dampen the effect of fertility transition through population momentum. Each ethnic group comprises a large proportion of young population who are entering in reproductive age very soon. They can contribute to increase the amount of births even if the fertility rate is declining. One of the reasons explained for faster fertility decline during the decade (June 1994 - June 2004) is the decade long (1995-2006) political insurgency which caused internal as well as external displacement (MoHP, New ERA, ORC Macro, 2007). If this is true, there is a possible risk of Baby-Boom, as Nepal has entered in peace process. The disintegrated families are reuniting and displaced people have returned and faster economic growth is expected to take place after the conflict is settled. These are conditions enough to increase the fertility level, not necessarily in all but, in some ethnic groups. But if the fertility trend during mid 1994 to mid 2005 continues, it can be expected that the TFR of Nepal will (as expected to) reach to replacement level by the

next decade. For which Janajaties, Dalits and Muslims should be duly appreciated. Though, fertility reaches to replacement level, population growth is not expected to decline faster due to population momentum which is an urgent demand of policy intervention.

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