Explaining persistent high fertility in Uganda using ethnicity; A case of Ateso and Basoga ethnic groups of Uganda

By

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Abstract
The relationship between ethnicity and fertility has been studied in many countries particularly those of Western Europe but little is known about the relationship between fertility and ethnicity in Uganda. According to past censuses, Uganda's population doubles in less than 25 years UBOS, 2005. In trying to understand why this population growth has remained high, this paper looks at how different ethnic groups behave in determining their fertility outcome. It examines two ethnic groups namely the Basoga and Ateso (Itesot). The Basoga have remained the third largest ethnic group for over a century with its proportion on the entire population increasing. On the other hand, the Ateso were one time the second largest ethnic group but have now become the fifth. What could be the probable reasons of one group maintaining its position while another declining?

The study used secondary data sources from the 2002 Uganda Population and Housing Census. Direct methods of fertility estimation measured by Total fertility Rates (TFR) were used to compare fertility between the two ethnic groups Ateso and Basoga. Findings indicated that the fertility for both ethnic groups based on census data is high with TFR for Ateso at 7.3 and Basoga at 6.8. The major explanation for this persistent high fertility can be explained by residence and socio economic status which in this case were possession of assets. There is correlation between residence and possession of assets hence poverty may explain high fertility. In all the districts considered where these ethnic group live side by side, the Ateso had a higher fertility than the Basoga. When all factors are controlled for, the fertility of the Ateso is slightly higher than that of the Basoga but the difference is not statistically significant.

Introduction
According to the last five censuses between 1948 and 2002, Uganda's population growth rate is very high and the population has been doubling in less than 25 years. In trying to understand why this population growth has remained, one may need to look at how different ethnic groups behave in determining their fertility outcome.

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Ethnic groups in Uganda

Uganda like most African countries has many ethnic groups which according to the 1995 constitution a total of 56 ethnic groups are recognised. Each of these has its own homeland and distinctive language, values and culture. The ethnic differences play a major role in shaping the behaviours and ways of life of the individual. Though some of the traditional values have changed due to the integration of the people as a result of migration and/or intermarriages, some still continue to exist and are not yet to become uniform. It is therefore not surprising to expect group variations in aspects of reproductive ideals and behaviour. The cultural groupings, such as, Baganda, Basoga, Batoro, Banyoro, Atesoit etc are headed by traditional kings or chiefs who are not politically elected but have an indirect role in community governance and moral build up.

The 2002 Census classified the Ugandans into the 56 legally recognised ethnic groups existing at that time. Table 1 shows that there were nine ethnic groups with a population of over one million persons, and these collectively constituted over 70 percent of the indigenous population.

These groups can also be classified into 4 broad groups with related cultural namely the Bantu, Nilotics, Hamites and Nile Hamites. There is a lot of similarity by these major ethnic groups within these which sometimes affects the behaviour of the small groups.

Table 1: Distribution of Ethnic Groups by Population Size

Population Size	Ethnic Groups		Population	
	No	Names	Number ('000s)	Percentage
1 million or More	9	Baganda, Banyakole, Basoga, Bakiga, Ateso, Langi, Acholi, Bagisu, Lugbara	16,529.4	71.0
500,000 – 1,000,000	4	Banyoro, Bakhonzo, Batoro, Alur	2,412.8	10.4
250,000 – 500,000	8	Bafumbira, Bagwere, Jopadhola, Banyole, Banyarwanda, Madi, Basamia, Karimojong	2,706.8	11.6
100,000 – 250,000	5	Sabiny, Bahororo, Kumam, Baruli, Kakwa	798.4	3.4
25,000 – 100,000	11	Jonam, Bagwe, Pokot, Babwisi, Bakenyi, Bagungu, Batagwenda, Baamba, Kuku, Kebu (Okebu), Nubi	586.0	2.5
Less than 25,000	19	So (Tepeth), Banyara, Batuku, Chope, Babukusu, Banyabindi, Lendu, Basongora, IK (Teuso), Batwa, Bahehe, Dodoth, Ethur, Mening, Jie, Mvuba, Nyangia, Napore, Vonoma	160.8	0.7
Others		Non Indigenous Groups	93.5	0.4
Total	56		23,287.6	100

Source: UBOS 2006

This paper explores two ethnic groups in Uganda namely the Basoga and Ateso. The two ethnic groups are among the largest as seen in table 1 above where the Basoga are third and the Ateso are fifth.

The Basoga (Soga)

The Basoga are the Eastern neighbours of the Baganda.They occupy the region between Lake Victoria in the south, River Nile in East, Lake Kioga in the North and River Mpologoma in the west. Currently Busoga (region occupied by Soga) is made up of the Districts of Bugiri, Iganga, Jinja, Kaliro, Kamuli, Mayuge, and Namutumba. Due to the continuous movements and intermingling of the people within the Busoga region, the history of Basoga is complex. It can be asserted however that the earliest inhabitants of Busoga belonged to the same Bantu group comprising the Banyooro, Batooro and Baganda. Their origin can therefore be traced like other Bantu groups to the Katanga region of Central Africa. It is believed that the earliest settlers in Busoga are said to have occupied Lake-shore areas of modern Bugiri (Bukoli). Legend has it that the first Musoga (Singular) was called Mukama who had eight sons. After that he proceeded to Bunyoro were he set up a kingdom. There exist many Lusoga dialects but people are hear and understand each other. Busoga region has been one of the peaceful areas since colonial times, hence the behaviour of the Basoga is influenced more by in-migrants. More about Busoga and the Basoga can be read on (http://www.ugandatravelguide.com/Basoga-culture.html; http://en.wikipedia.org/wiki/Busoga)

The Ateso (Itesot)
The Ateso (also referred to as Teso, Atesot and Atesot) are an ethnic group found in both Uganda and Kenya. They are the fifth largest ethnic group in Uganda, living mainly in Teso sub-region (the districts of Soroti, Kumi, Katakwi, Kaberamaido, Tororo and Palisa districts). A sizeable number of Ateso also live in Busoga region mainly Kamuli and Bugiri districts. In Kenya they live in the Busia District of Kenya. According to anthropologists, the Ateso are part of a group that migrated from Ethiopia around 1600 A.D. and split into two branches, with one branch moving to present day Kenya to form the Kalenjin group and Maasai cluster. The other branch, called Ateker migrated westwards. Ateker further split into several groups, including Jie, Turkana in present day Kenya, and Ateso, Karamojong and Kumam in present day Uganda. Originally cattle herding people similar to the Karamajong, the Ateso have adopted a less nomadic lifestyle and have settled into mixed farming. Recent cattle raids by the Karamajong, after they acquired automatic weapons, resulted in a sharp decline in cattle herding by the Ateso. The recent internal uprisings in Uganda made many families in Teso region to move to Internally displace Peoples' camps (IDPs). More about Ateso (http://en.wikipedia.org/wiki/Ateso)

Ethnicity and fertility
Ethnicity is a powerful factor in Africa that affects all aspects of life for the individual. For most Africans, ethnic belonging is definitely a more powerful reference than the wider national identity. It is not a surprise that ethnic variations in reproductive outcomes in Africa including Uganda are capturing the interests of scholars and policy makers. This is partly because societies are structured among other characteristics by ethnic belonging. The individuals' cultural attachment and identity determines behaviour including reproduction (Caldwell and Caldwell, 1987 as cited in Nahmias 2005).

In his intensive study about ethnicity and contraceptive use in Sub Saharan Africa, Addai (1999), looks at two schools of thought that determine contraceptive use by ethnicity hence fertility control. There are two schools of thought about the determinants of fertility and ethnicity. The first school of thought is that differences in socioeconomic and

demographic characteristics are the main cause of observed differences in contraceptive use levels (United Nation, 1987; Goldscheider 1971). This school of thought reasoning is that the effect of ethnic membership on contraceptive use merely reflects socioeconomic and demographic differences by the members of the different ethnic groups. This is reaffirmed by Brunette (1996) as cited by Nahmias (2005), "we should not equity fertility with culture". Ethnicity is just one element in the culture and vice versa. Ethnic groups particularly in Africa where more often one group designated the favoured group bestowed education and relative power by their colonial overlords differ in their structural assimilation. They have different levels of socio economic development including education, employment opportunities, occupational structure, migratory behaviour, mortality levels and housing. All of these are known to affect fertility. Once socioeconomic development passes a threshold level, it has a negative effect on fertility.

The other school of thought is the human behaviour. Though accepting the premise of the characteristics school of thought, they suggest that the means to resist fertility regulation is partly culturally determined. Barriers to contraceptive use could also be ethnically influenced, being subject to widespread myths and fears regarding its effect on the woman (Goody 1990, Caldwell and Caldwell 1988). It is noted that ethnic groups also differ in their socio-cultural characteristics. Undoubtedly, in any society, sexual and reproductive behaviour is socially prescribed. As well as directly determining reproductive preferences, other factors that can directly influence fertility and are culturally shaped are, for example, postpartum abstinence, sexual promiscuity and coital frequency, age at first union/marriage, extended breastfeeding, sterility and rates of fatal loss. These proximate determinants are of greater significance in the African context, particularly pre-transition countries, where there is little conscious fertility control (Bogaarts et al., 1984). These themselves are shaped by other indirect social determinants such as the lineage system and female autonomy (Derose et al., 2002). Bongaarts and Watkins (1996) stated that patterns of nuptiality and breastfeeding are largely determined by community customs and thus under social control. Indeed, Bongaarts et al. (1984) found that even in pre-transition African societies there were wide variations in fertility, despite very low levels of direct fertility regulation. If ethnicity itself is an important factor, then it would be expected that once socioeconomic conditions are controlled for, then any differences in fertility by ethnic group would still remain. Furthermore, if ethnic group determines culturally led reproductive behaviour in Uganda then there will be more homogeneity among ethnic groups than among district groups, with the differences between districts being accounted for by structural characteristics.

In trying to explain the difference in fertility between the Ateso and Basoga (Soga), these two schools of thought have been put into consideration but with greater emphasis the first school of thought. If this is the case, then controlling for socioeconomic determinants should render insignificant any differences in fertility.

Hypothesis
It is expected that: [2]

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[2] This hypothesis has was adopted with modification from Nahmias Petra (2005) "Ethnicity and fertility change in West Africa: An Application of diffusion theory"

1.   After controlling for socioeconomic differences, the differentials in fertility between Basoga and Ateso will remain.

2.   The fertility behaviour of Basoga and Ateso ethnic groups in different districts will also be similar.

3.   One of the main determinants of the differential relationship between ethnicity and fertility at the district level will be the proportion of the population represented by two groups (Soga and Ateso).

5.   Data source

The main data source used in this study is the 2002 Uganda Population and housing Census. The Uganda 2002 census is so far the most comprehensive ever undertaken census not only in Uganda but also in Africa in general. It had several modules including the main module on population and housing, an agricultural module, a micro and small enterprises (MSE) module and a community module. The reference period, i.e. the date to which the data relate was the night of 12/13 September 2002. However, the actual enumeration was carried out between 13 and 19 September 2002. For the first time in Census undertaking in Uganda, one standard questionnaire was administered to all households (persons) countrywide. Among the different variables captured was ethnicity.

Gaps in Census analysis

Though there was a question on ethnicity, the only analysis done by the central statistical office of Uganda was on numbers of each ethnic group as showed earlier in table 1. Hence it is important we further analysis is done by ethnicity.

Methodology
Data analysis

In order to control for socio economic differences, the fertility of the two ethnic group was compared by different socio economic factors.

Fertility Estimation

Direct methods of fertility estimation have been used in deriving the different Age Specific Fertility rates (ASFR) and Total fertility rates (TFR).   Though the original data from UBOS was entered in Cspro, Stata and Microsoft excel were the software used in the analysis.
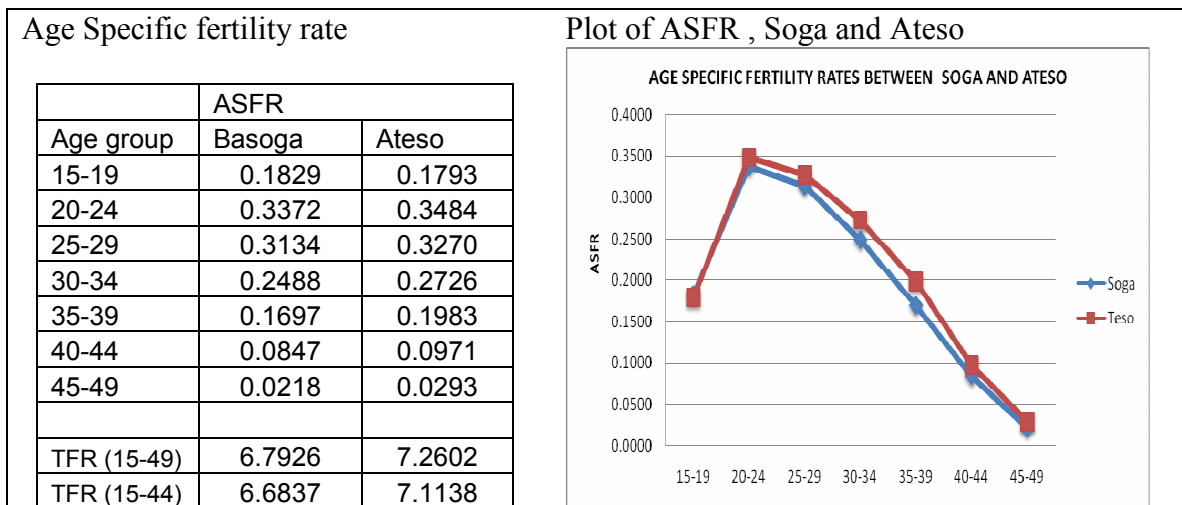
Data selection

The study selected data for women from the two ethnic groups namely Ateso and Basoga within the Eastern and Central regions. The number of Basoga in Northern Uganda and Ateso in Western region is also so small that data from these two statistical regions was not used.

For the district specific analysis only districts with at least 1000 women from both ethnic groups aged 15-49 were compared. Since the Census was conducted in September 2002, birth considered for the last 12 months were children born between September 2001 and August 2002.

Findings of the study

Estimates of fertility were done using the direct methods to find out if the fertility between the Basoga and Ateso were significantly different. From the results, the fertility of Ateso was higher than that of the Basoga. This is irrespective of whether 15-49 or 15-44 age groups.

Since the aggregate total fertility value shows some difference, the task now is to see if it is statistically significant. In order to identify the original difference, a plot was made to observe the difference using ASFRs. The ASFR indicate that the fertility movement is the same between the Ateso and the Basoga. At age group 20-24, the ASFR for the Ateso becomes slightly higher. This trend is followed upto the last age group (45-49).

Age Specific fertility rate			Plot of ASFR , Soga and Ateso

	ASFR	
Age group	Basoga	Ateso
15-19	0.1829	0.1793
20-24	0.3372	0.3484
25-29	0.3134	0.3270
30-34	0.2488	0.2726
35-39	0.1697	0.1983
40-44	0.0847	0.0971
45-49	0.0218	0.0293
TFR (15-49)	6.7926	7.2602
TFR (15-44)	6.6837	7.1138

AGE SPECIFIC FERTILITY RATES BETWEEN SOGA AND ATESO

From the above findings, one would ask what determines fertility differentials between the Ateso and the Basoga? In order to answer this question, the next sessions that follow look at fertility based on different social economic characteristics.
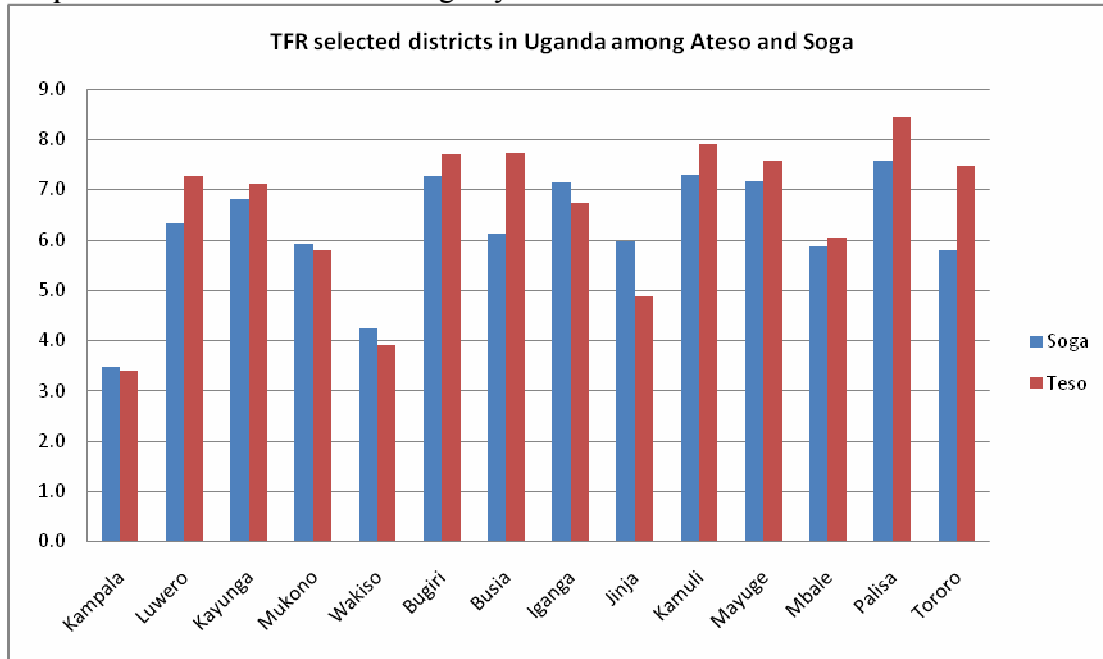
Fertility differentials by district
Can geographical location determine fertility differences between members of the same ethnicity? In order to answer this question, districts which had at least 1000 women of the Ateso and Basoga ethnic groups aged between15-49 have been considered. Graph 2 shows a plot of the total fertility rate (TFR) for the different districts which met this criteria.

It can be observed that there is a significant difference in TFR by district of enumeration. The variation in fertility can be explained by geographical location. The highest fertility irrespective of ethnicity was registered in Palisa district while the lowest in Kampala district. A close look at the districts indicates that fertility is lowest among the urban districts or districts with a high proportion of urban population and highest among districts with a small urban population. These include Kampala with the lowest TFR for both ethnic groups, followed by Wakiso and Jinja in that order. TFR was also found to be highest in the rural districts of Palisa, Bugiri, Kamuli and Mayuge. All these are predominantly rural districts with the proportion of urban population being less than 5% (Bugiri-4%, Palisa-5%, Kamuli-5, Mayuge-3 %)

In all districts except for Kampala and Wakiso which are urban and Peri urban districts respectively, fertility was high in all districts and TFR exceeding 5 children per woman if she followed the current ASFRs. This high fertility is for both ethnic groups. For the districts of Mukono, Kampala and Mbale the TFR is almost the same between the Basoga and Ateso with a difference of less than 0.1 children. One could thus say that geographical location could not be used to explain fertility differences between the Ateso and Basoga. Neither can it explain why fertility is high. Thus it was necessary to look at another factor called urbanization. The variations by district can be explained mainly by residence. For example, the TFR for Basoga in Jinja is higher than that of the Ateso because the majority of the Ateso in Jinja live within the municipality compared to Basoga who are found in both rural Jinja and urban Jinja. Similarly a wide gap in Busia and Tororo is because most Ateso in these two districts live in the country side compared to the Basoga who are mainly found in the municipality or within the trading centres.

Graph 2: TFR for Ateso and Basoga by district

**Fertility differentials by rural-urban**
As expected the fertility for both Basoga and Ateso is lower among the urban dwellers than rural dwellers. It is observed that TFR for Ateso is higher than that of the Basoga for both rural (Ateso-7.6, Basoga 7.1) and Urban (Ateso-4.3 Basoga 4.1).

A plot of the ASFR for both ethnic groups by rural-urban shows that both the Ateso and Basoga have similar ASFR for rural and urban. The two graphs (lines) look alike just shifting graph one either upwards or downwards. In both cases, the line for Ateso is above that of the Basoga.

So could residence explain the difference in fertility among the Ateso and Basoga. From these findings, controlling for residence, the difference in fertility may be explained by ethnicity. It should also be observed that fertility is very high among the rural dwellers

than the urban. Since only 12% of the Uganda population is urban (UBOS 2005), may be high fertility in Uganda is explained by the majority of the population being rural.

The question now to pose is why is it that fertility in the urban areas is lower than that of the rural. Usually, urban dwellers have more assets than rural dwellers. It is therefore important that we look at fertility in relationship to possesion of assets.

ASFR for Soga and Ateso by Rural-urban
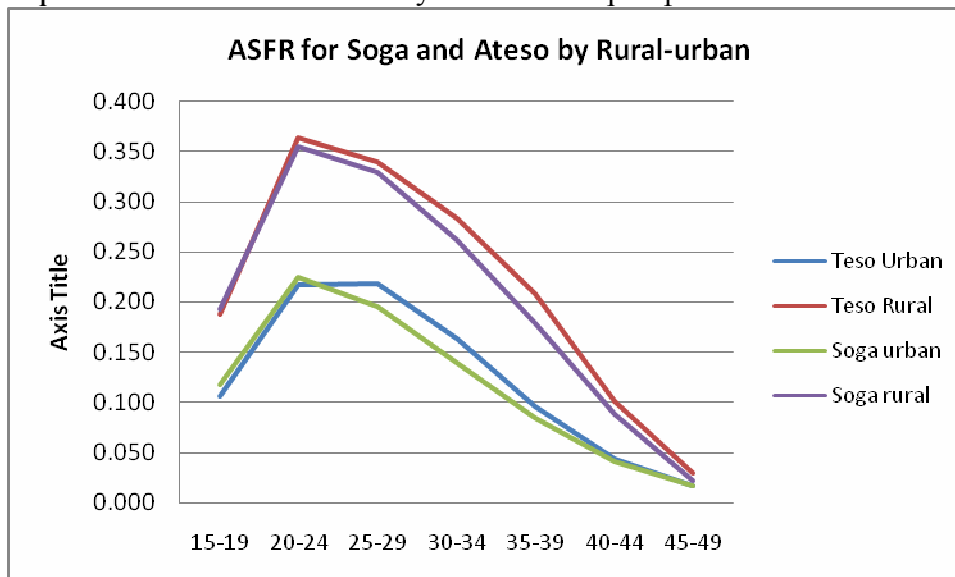
**Fertility by Possession of selected household assets**
The 2002 population and housing census had questions on some household assets. The selected assets considered are either a measure of wealth or source of information. It is therefore important to consider fertility variation by possession of these assets. The first set of assets considered were possession of a motor vehicle, motorcycle, bicycle and television. Apart from possession of a bicycle where the proportion of Ateso with a bicycle is higher than that of the Basoga, the other three, more Basoga have the selected items than the Ateso.

Table 3: Possession of selected assets by the household

	Ateso %	Basoga %	Total Both (%)
Own a motor vehicle	1.3	2.5	2.0
Own motor cycle	1.7	3.4	2.6
Own a bicycle	56.0	50.4	52.8
Own a television	3.5	5.7	4.8

Graph III

TFR for Soga and Ateso by possession of transport goods in hhold
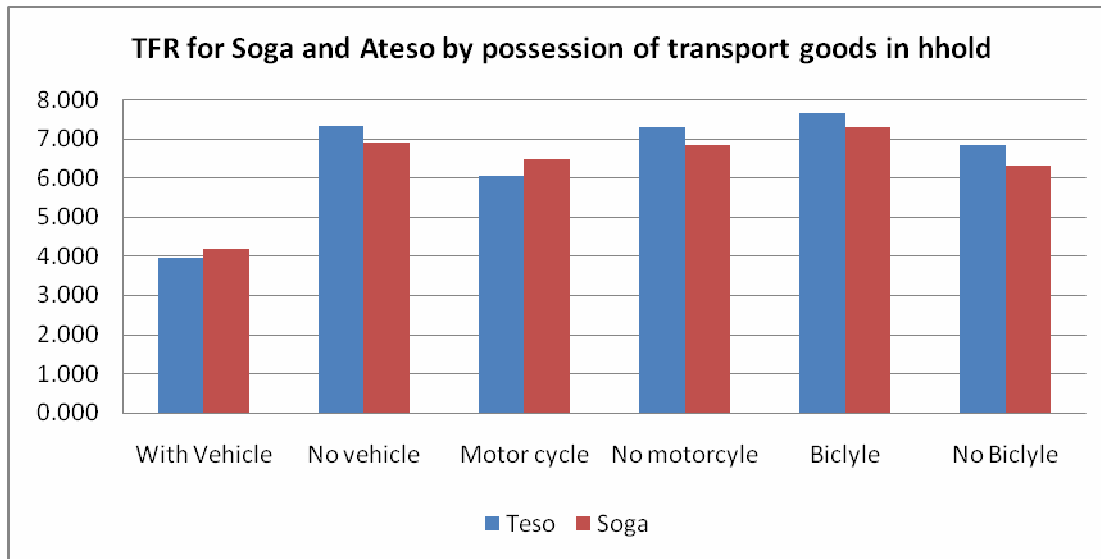
Possesion of these transport assets depicts some interesting results. Possession of motor vehicle shows TFR being lower for both Basoga and Ateso. While TFR for those who are without a vehicle compares well with those without motorcycle and those with a bicycle. Suprisngly, those with bicycyles have a high fertility than those without bicycles. Since almost every holdhold wants to be with a transport asset, it implies that those households with bicycles are the less disadvantaged households. For the fertility differential between Ateso and Basoga apart from possession of vehicle and motorcycle, the fertility of the Ateso is higher than that of the Basoga. Secondly, women from households without transport items have higher TFR than those with transport items save for the bicycle.

Fertility by Possession of TV and Radio


TFR by posession of TV, Radio
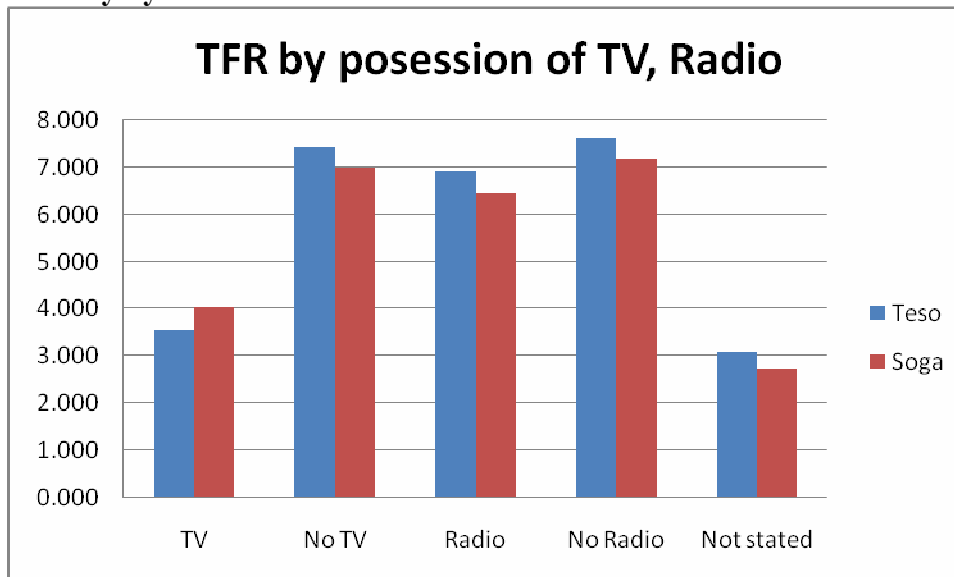
Being in possession of a TV and Radio seems to be related with fertility. The fertility of individuals with TV is far lower than that without a TV. It should however be noted that usually for one to have a TV set, that household in most cases possesses electricity. In Uganda only 4.6 percent of the households own a TV with a wide variation by place of

residence. According the Census results only 2 percent of the rural households have TV set compared to one in five (19.7%) in urban areas with a TV set. A plot of ASFR between the residence and possession has the same pattern for both ethnic groups. It can be concluded that possession of TV, fertility can be explained in the same way as residence.

In the same way fertility of those with radios is lower than the fertility of those without radios except that the gap is not so wide. This difference is small as possession of radio is also high in rural areas at 46.1 percent while that for urban is 68.5 percent.   Apart from possession TV where the fertility of Basoga is higher than that of Ateso by about half a child, the fertility of the Ateso is higher than that of the Basoga in all other cases.

Fertility and source of information.
In continuing to explain if there is variation in fertility by ethnicity, we looked at source of information. Usually for any change to take place, the population must first be knowledgeable. Fertility for the both Ateso and Basoga in regard to source of information is lowest among those with fixed phones, followed by those whose source of information is the mobile phone. On contrary, fertility is highest among those whose source of information is by word of mouth. Also observed is that fertility of the Soga with fixed phone and mobile phone is slightly higher than that of Ateso with fixed phone or mobile phones respoctively.
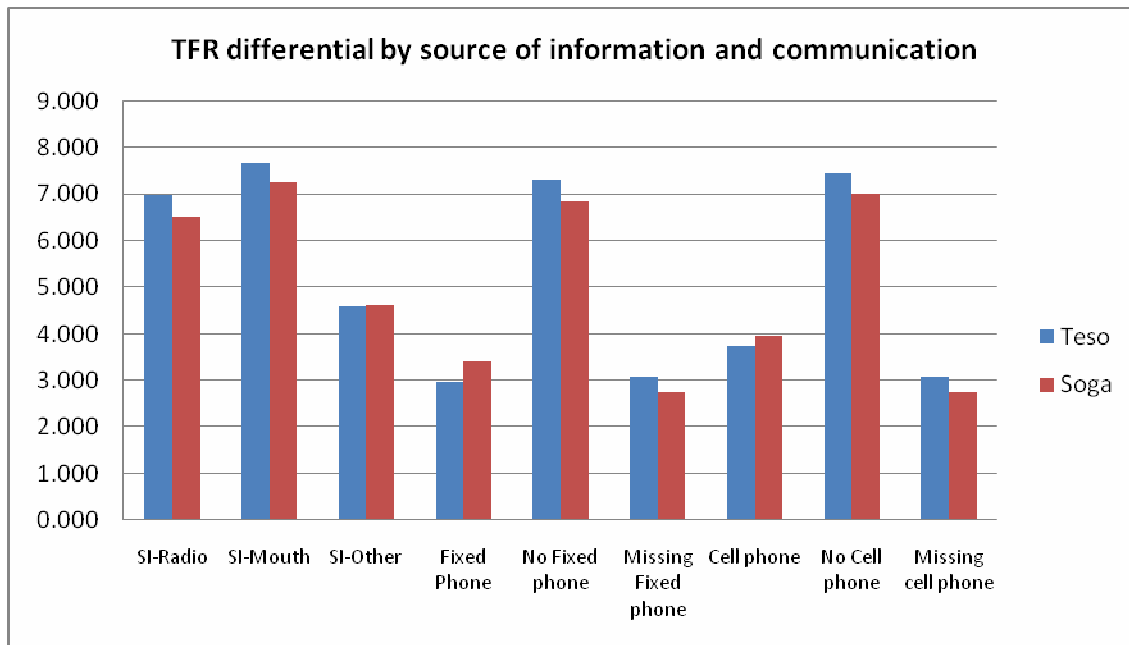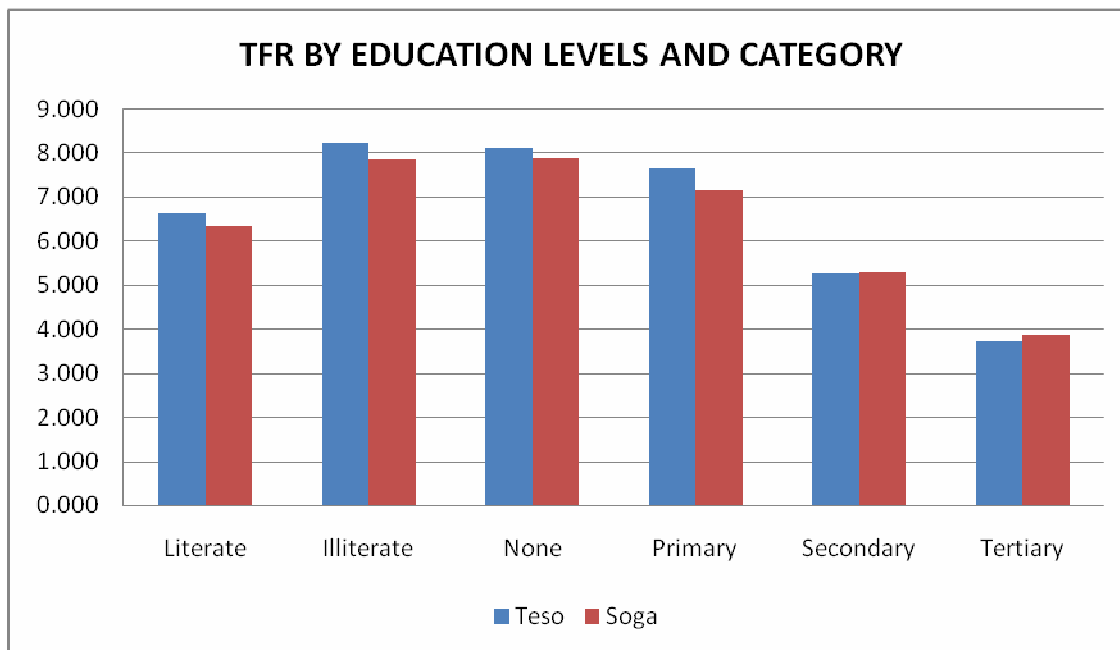

Fertility and educational level
Another social economic variable which affects different behaviour is education. The fertility of the illiterate women (those who said did not know how to read and write) is higher than that of literate women. As in the total population, the fertility of Ateso among the illiterate and literate is higher than the fertility of the illiterate and literate Basoga. This implies that controlling for literacy, the Ateso have a higher fertility compared to the Basoga. Within the same ethnicity, the difference between literate Ateso

and illiterate Ateso is almost same as difference between literate Basoga and illiterate Basoga at 1.6 and 1.5 children respectively.

Since a significant difference exists by literacy levels, is it uniform within the different education levels? As such analysis was done at four levels of education. Women who have never attended school who are in most cases illiterate have the highest fertility followed by those with primary level. Women who have acquired post secondary (tertiary) have the lowest fertility level irrespective of ethnicity. As you move across the levels of education, fertility of the Ateso begins to drop faster than that of Basoga. At secondary level, the Ateso and Basoga have the same fertility. At tertiary level, the Basoga fertility exceed that of the Ateso. One may conclude that education affects the Ateso and Basoga differently. Educating the Ateso will decrease their fertility much faster than educating the Basoga ceteris Paribas.

TFR BY EDUCATION LEVELS AND CATEGORY

Fertility and source of livelihood
The sections above looked at different economic characteristics and fertility. For example, posession for TV or vehicle and high educational level (tertiary) having the lowest fertility compared to those without such items. This section looks at the main source of livelihood within the household. In all categories of livelihood except those enganged in trade, the fertility of Ateso is higher than that of the Basoga. This implies that livelihood cannot be used to explain the slight difference in fertility between the Ateso and the Basoga.

TFR differential by main source of livelihood
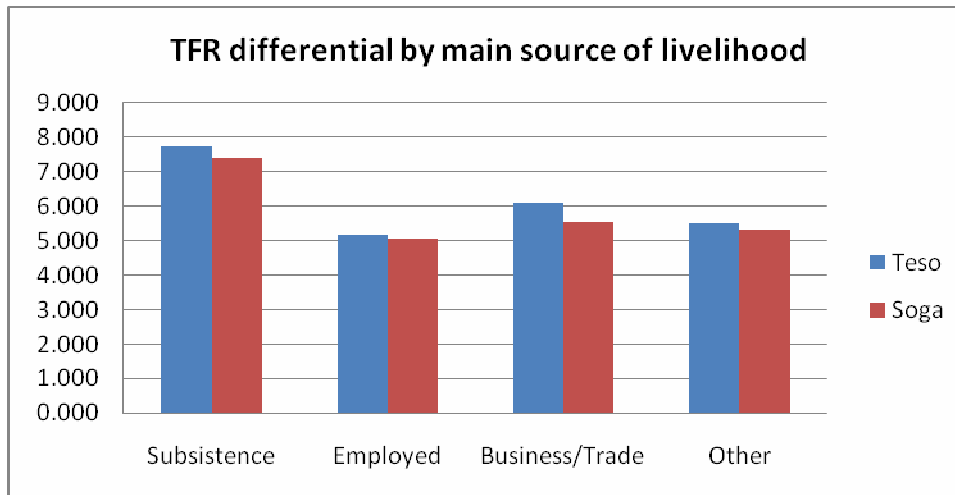
Marital fertility by ethnicity

The previous sections looked at fertility based on socio economic factors. This section looks at fertility based on social factor namely mariatal status. Fertility for both ethnic groups was highest among the monogamous marital union. Comparing fertility of the Ateso and Basoga by the different marital status, the fertility of the Ateso is higher than that of the Basoga for all categories of marital status. The highest difference is observed among the divorced followed by monogamous and never married categotries. For the Basoga, fertility is the same for the monogamous and polygamous union. Since marriage is these two groups is almost universal, one may conclude that the persitent high fertility may be due to universal marriages. As (Lubaale & Kayizi, 2007 Unpublished) found out in their paper, fertility in Urban areas increased between two survey periods 1995 and 2001 in urban areas due to increase the the proportion married. As expected, non mariatal fertility, that is fertility among the never married was lowest. The non marital fertility TFR is still higher than fertility of any developed country in the world including some in Africa.
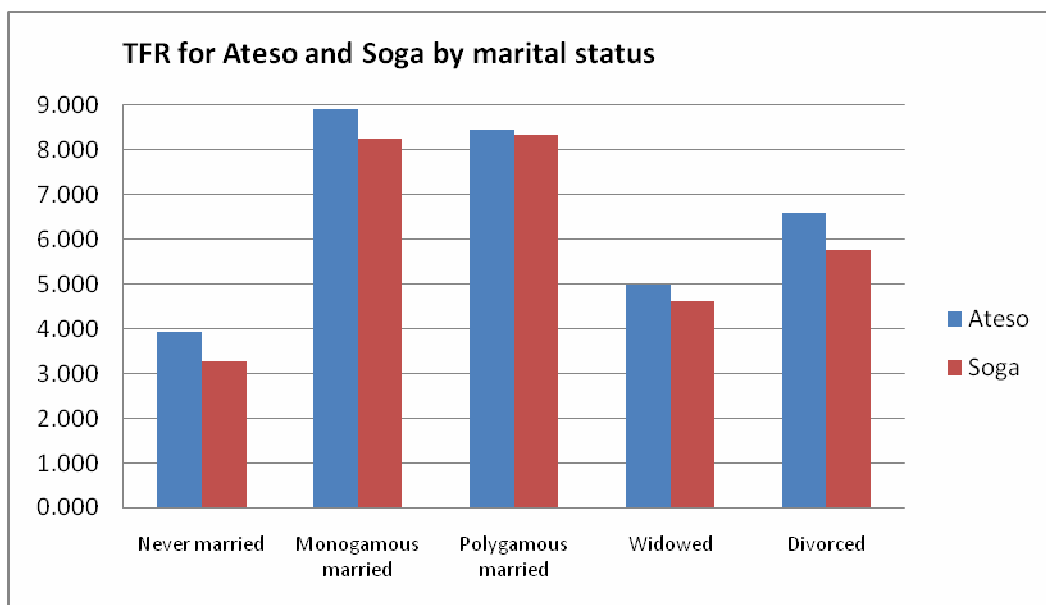
Proportion of Basoga and Ateso in fertility determination

Apart from the proportion urban within the district, what else can explain the lower TFR in some districts and the high in other districts. Since the one of the hypothesis to be tested by the study was that "one of the main determinants of the differential relationship between ethnicity and fertility at the district level will be the proportion of the population represented by two groups (Basoga and Ateso).

Another hypothesis considered was that the fertility of the two ethnic groups will depend on the proportion of the population within the district. In order to prove this hypothesis, the proportion of the two ethnic groups among women aged 15-49 was compared to all women aged 15-49 within the district.

First it is observed that the fertility for the two ethnic groups does not depend on the proportion within the district. For example, Palisa has the highest TFR for the Ateso at 8.4 with about 31 percent Ateso. Similarly Kamuli has TFR for Ateso at 7.9 with proportion Ateso only 3.7 percent which is far higher than that of Ateso in Kumi (TFR=7.4) with almost the entire population Ateso.

In the same way, fertility for the Basoga is also highest in Palisa when the proportion of Basoga in Palisa is less than 3%. But apart from Palisa, there is some relationship between the Soga TFR and the proportion of the Basoga within the district particularly if you control for residence. It should noted however that usually, the Basoga are less migrants, hence those found elsewhere mainly belong to a higher socio economic status hence lower fertility. It is prudent to say that the fertility will depend on the proportion of the population. Since Palisa has the highest TFR for both ethnic group yet these ethnic group form a small proportion of the population.

District	Teso-TFR	Teso%	Soga-TFR	Soga-%	Difference
Kampala	3.4	2.26	3.5	4.12	-0.1
Wakiso	3.9	1.24	4.2	2.73	-0.4
Jinja	4.9	3.12	6.0	67.24	-1.1
Mukono	5.8	2.66	5.9	9.65	-0.1
Mbale	6.0	3.09	5.9	2.03	0.2
Iganga	6.7	1.64	7.1	88.54	-0.4
Katakwi	7.1	97.4	+	0.05	
Kayunga	7.1	3.89	6.8	17.58	0.3
Luwero	7.3	1.56	6.3	1.59	1.0
Soroti	7.4	81.71	+	0.47	
Kumi	7.4	95.75	+	0.2	
Tororo	7.5	22.24	5.8	1.6	1.7
Mayuge	7.6	4.89	7.2	55.32	0.4
Kaberamaido	7.6	20.45		0.08	
Bugiri	7.7	11.1	7.3	29.15	0.4

Busia	7.7	12.92	6.1	3.96	1.6
Kamuli	7.9	3.73	7.3	82.86	0.6
Pallisa	8.4	30.51	7.6	2.86	0.9

+ These districts had less than 1000 women in the reproductive age groups

Fertility and ethnicity
From the above analysis, a number of conclusions can be drawn from the direct estimation of TFR. The first is that fertility of the Ateso is higher than that of the Basoga. When you control for districts, fertility is higher among the rural than the urban. Observing using possession of particular assets,

Discussion and summary of results
During the literature review, two schools of thought were introduced. The first school of thought was that differences in socioeconomic and demographic characteristics are the main cause of observed differences in contraceptive use hence fertility regulation. The second school of thought was in relation to human behaviour which suggests that the means to resist fertility regulation is partly culturally determined. In order to understand the two schools of thought, three hypotheses were tested; The first hypothesis was that "after controlling for socioeconomic differences, the differentials in fertility between Basoga and Ateso will remain". This hypothesis relates to the second school of thought. Based on this hypothesis, it was discovered that in almost all cases, the fertility of the Ateso was higher than that of the Basoga except for possession of an expensive item. One may conclude that there may be some human behaviour difference existing between the Ateso and Basoga which are not socioeconomic or demographic characteristics. The second school of thought was that "fertility behaviour of Basoga and Ateso ethnic groups in different districts will also be similar". This hypothesis was proved to be true. Where the fertility of the Ateso was low, fertility of the Ateso was also low like in Kampala districts, while where it was high, the fertility for both were high as in Pallisa district. It is important to note that in a few districts where the Basoga fertility was higher than that of the Ateso, the difference was less than a half child. The third hypothesis was that after "the main determinants of the differential relationship between ethnicity and fertility at the district level will be the proportion of the population represented by the two groups (Soga and Ateso)". This hypothesis could not stand. Instead fertility of both groups depended on the proportion of urban population.

In conclusion, one may say that fertility in Uganda is still high. The two ethnic groups exhibit high fertility. There is a relationship between fertility and the type of assets one has, literacy and level of education, and nature of employment. Unless one uplifts the standard of living of the population, fertility will remain high irrespective of ethnicity.

It is recommended that further analysis should be done to include all the ethnic groups of Uganda. Further more analysis needs to be that segregating between big and small groups and by other socio factors like religion. Modelling can also be done using censuses; namely the 1991 and 2002 censuses.

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(http://www.ugandatravelguide.com/Basoga-culture.html;
http://en.wikipedia.org/wiki/Busoga)

(http://en.wikipedia.org/wiki/Ateso)

Appendix
Table 3: TFR differentials by selected Characteristics among the Ateso and Basoga

	Teso	Basoga	Difference
District			
Kampala	3.4	3.5	-0.1
Luwero	7.3	6.3	1.0
Kayunga	7.1	6.8	0.3
Mukono	5.8	5.9	-0.1
Wakiso	3.9	4.2	-0.4
Bugiri	7.7	7.3	0.4
Busia	7.7	6.1	1.6
Iganga	6.7	7.1	-0.4
Jinja	4.9	6.0	-1.1
Kamuli	7.9	7.3	0.6
Mayuge	7.6	7.2	0.4
Mbale	6.0	5.9	0.2
Palisa	8.4	7.6	0.9
Tororo	7.5	5.8	1.7
Residence			
Rural	4.3	4.1	0.2
Urban	7.6	7.1	0.4
Marital status			
Never married	3.9	3.3	0.6
Monogamous married	8.9	8.2	0.7
Polygamous married	8.4	8.3	0.1
Widowed	5.0	4.6	0.4
Divorced	6.6	5.8	0.8
Education			
Literate	6.6	6.3	0.3
Illiterate	8.2	7.8	0.4
None	8.1	7.9	0.3
Primary	7.6	7.1	0.5
Secondary	5.3	5.3	0.0
Tertiary	3.7	3.9	-0.2
Household property			
With Vehicle	4.0	4.2	-0.3
No vehicle	7.3	6.9	0.4
Motor cycle	6.1	6.5	-0.4
No motorcycle	7.3	6.8	0.5
Bicycle	7.6	7.3	0.3

No Bicycle	6.8	6.3	0.5
Overall	7.3	6.8	0.5
Possession of Radio /TV			
TV	3.6	4.0	-0.5
No TV	7.4	7.0	0.4
Radio	6.9	6.5	0.5
No Radio	7.6	7.2	0.4
Missing radio	3.1	2.7	0.3
Source of livelihood	Teso	Basoga	
Subsistence	7.7	7.4	0.3
Employed	5.2	5.1	0.1
Business/Trade	6.1	5.5	0.5
Other	5.5	5.3	0.2
Source of information	Teso	Basoga	
SI-Radio	7.0	6.5	0.5
SI-Mouth	7.7	7.2	0.4
SI-Other	4.6	4.6	0.0
Fixed Phone	3.0	3.4	-0.4
No Fixed phone	7.3	6.8	0.5
Missing Fixed phone	3.1	2.7	0.3
Cell phone	3.7	4.0	-0.2
No Cell phone	7.4	7.0	0.4
Missing cell phone	3.1	2.7	0.3