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INTRA-HOUSEHOLD SUPPORT FOR HEALTHCARE EXPENDITURES IN KERALA, INDIA

Manasi Bawdekar[1] and L.Ladusingh[2]

Abstract

With impending greying of the population in coming decades and lack of adequate generic public health care provision in India, healthcare expenditure of the elderly is largely dependent on the resources of the family members. This paper attempts to study the sex-wise magnitude and age pattern of intra-household transfers for healthcare expenditures of elderly in Kerala in India using the data from the India Human Development Survey (2004-05) of the National Council for Applied Economic Research (NCAER) and University of Maryland. Kerala is a state with universal education and the highest elderly population in the country. Findings show that there is a considerable gap between income and healthcare consumption of sixty-plus population and major support for their healthcare expenditures comes from working members of the households. Unlike health, out-transfers for education are substantial in the late years indicating active support of grandparents in sharing the educational burden of their grand children either through their own earnings or through the remittances sent by the migrants of that household. Gap between consumption and the in-transfers for healthcare is narrow indicating that intra-household transfers play a major role in meeting the healthcare consumption needs in Kerala.

Key words: Healthcare expenditure, intra-household transfers, reallocation of resources

[1] PhD student, International Institute for Population Sciences, Mumbai, India. email: manasi_rahul@rediffmail.com
[2] Head, Department of Mathematical Demography and Statistics, International Institute for Population Sciences, Mumbai, India. email: lslaishram@iips.net

Introduction

India's population continues to grow larger and older. The number of sixty plus in India is expected to increase to 100 million in 2013,198 million in 2030 and to an enormous 330 million by 2050 (United Nations, 2006). These population changes will have a significant impact on India's economic growth and especially on private healthcare spending as public healthcare options are negligible and most of the household expenditure is out-of-pocket (Bhat and Jain, 2006). Even the poorest patients who are in actual need of government health services have no option but to avail of healthcare from the private sector due to the non-availability of government subsidised services in public hospitals (Kunhikannan and Aravindan, 1996). As a result, the share of private healthcare has increased significantly in India. Expenditure on private sources amounts to 85 per cent of the total health expenditure. Evidence from developed countries and a limited set of developing countries indicates that not only does health expenditure per person increase with age, but that the rates of increase in per capita health spending are highest for the older groups. While health costs have been rising substantially, the NSSO 60th round survey carried out in 2004-05 reports that rural households spend 13 percent of their total consumption expenditure on health compared to 10 percent in urban areas. Thus, public sector health infrastructure in the country, be it primary health centres or medical college hospitals, is inadequate to cater to the rising health needs of a growing population.

Kerala is demographically one of the most advanced states in India. Post Independence, the state witnessed significant progress in human development; it boasts of the highest literacy rate and has one of the best health care systems in the country. Alongside this growth, are two parallel trends, a growing greying population and the increasing outward migration of the younger working generation. The proportion of elderly was around 9 percent to the total in 1991, and with the decline in fertility and mortality rates, population projections expect it to increase to 19 percent in 2021 and 35 percent in 2051(Census 2001). The old age dependency ratio is expected to be around 1:3 in Kerala as compared to 1:10 at an all India level (United Nations, 2006). Apart from the decline in fertility and mortality which contributes to the ageing of the population, another relevant factor in Kerala is the outward migration of persons in the working age group leaving their old parents behind. These trends have influenced family expenditure patterns, especially in the rural areas.

In the family development cycle, when it comes to the allocation of budget on family expenditure, young couples are faced with dual responsibilities of supporting the elders and a strong desire to educate and invest more in the development of their children. To strike the correct balance between allocation of investment in the schooling and health of the younger generation (children) and in the

healthcare of the elderly (parents) is a challenging task. This calls for an efficient allocation of family resources and prudent management of the trade-off between expenditure on the education of children and healthcare of the elderly. This depends on a number of factors within the household—available money, assets, extent of liabilities, number of earning members, number of dependants, nature of decision making, social values and norms of that family and also those of society as a whole. Thus, numerous culturally, temporally and spatially specific dimensions of social differences affect the intra-household decision-making and resource allocation within a family.

Individuals within a household are often assumed to be equally wealthy or poor and to have equal access to goods and services. Individual consumption and transfers by age are seldom calculated because attention naturally turns towards more disaggregated measures such as labour force participation rates or household expenditure. Understanding the role of transfers between the parents, children and elderly in India has considerable value due to lack of formal support for the old, the relatively lower socioeconomic status of the population and the impending increase in the share and number of the elderly (Martin 1990, UN 2002).The reallocation of resources across age groups is an important feature of any economy, yet it goes largely unmeasured at the household level. Familial transfers are almost universally the primary source of resources for children and can have a profound effect on intergenerational equity in the case of the elderly (Mason and Miller, 2000). Investigations of intergenerational transfers particularly for the healthcare of the elderly have been deficient mainly due to the lack of data on transfers to economically dependent members of the family for specific needs. In India, private inter-household transfers are important, and, because many elderly live with their adult children, intra-household transfers are also substantial.

For the past five decades, the life-cycle model has provided the framework for understanding household consumption and saving decisions. As per this model, at the micro economic level, if rates of return to education are high, households may choose to refrain from present consumption and investment in education in order to increase the earnings capacity and other benefits in the future (Tilak, 2002). In India, however, parental attitude is more altruistic to children's health than to other aspects of child welfare such as education, which they may or may not consider significant (Desai, 1995).

Some economic theories also have attempted to explain motivations for familial transfer of resources. Becker's family model (1974, 1991) assumed that each household's head redistributes the resources among family members uniformly so that surplus members' resources flow to deficit members in keeping with the altruism motive. The more altruistic the head, the more the investment in children without expecting any returns (Becker and Tomes, 1976). Altruism can also motivate children to transfer resources to old parents in households where parents have instituted the social value of

transfer (Lee et al., 1994). Most of the intergenerational transfer studies in Asia are on parent-child transfers (Zimmer and Kwong, 2003, Ofstedal et al., 1999). The main source of income of older persons in the Philippines, Thailand, Taiwan and Singapore is transfers from adult children (Hermalin et al, 2002). In China, between 30 to 50 percent of aged persons receive financial support mainly from adult children (Chen and Silverstein, 2000). The National Transfer Accounts (NTA) is a comprehensive macro-level intergenerational transfer framework and accounting system that has been developed to measure familial transfers at the aggregate level (Mason et al, 2006). While much work has been done on estimating and projecting ageing-related health expenditure and exploring the underlying factors in developed countries, little is known on intra-household allocation for healthcare in developing countries like India. There have been no such efforts at the micro or household level in India. Hence, the need to look into these aspects of family from the social, economic as well as demographic points of view to understand the process of transfers at the household level as a whole.

Household expenditure on food, non-food consumption and financial allocation for healthcare is influenced by a wide variety of factors. With the impending greying of population in the coming decades and increasing shortage of generic public health care provision in India, reallocation of resources between the members of family seems to be an important means of support particularly for the healthcare expenditure of elderly citizens.

This paper attempts to study the healthcare expenditure patterns with emphasis on intra-household transfers in the state of Kerala. The specific objectives are to estimate the magnitude of intra-household educational and healthcare transfers for males and females separately and also to find the donor and the recipient groups in the case of in- and out- transfers for education and healthcare. Educational consumption patterns play a crucial role while studying healthcare expenditure patterns in India because education and healthcare costs are the main consumption costs which result in life cycle deficit (LCD) among the young and the aged. Familial transfers from household members with disposable income are the means to support LCD to a considerable extent in India (Ladusingh and Narayana, 2007).

Middle aged couples as parents are always facing the challenge of allocating their available resources optimally between their children and their old parents. However, there are many inherent problems in estimating individual consumption and allocations. Fertility and age pattern of consumption may be jointly determined; parents may choose to have fewer children so as to invest more in each of them as in the quality-quantity theory of fertility (Becker and Lewis, 1973). Intergenerational transfers are pervasive. An individual's consumption is funded by the parents until he/she is economically independent. Consequently, adults must allocate a substantial portion of their income to consumption by their children, particularly educational consumption without ignoring the healthcare needs of their aged parents. In India, due to the traditional joint family system, elderly parents live and consume

with the adult couples in the same household. Thus, Lee et al., (2008) have rightly stated that an individual's consumption is mainly governed by three budget constraints—parents' resources, personal resources and children's resources.

Data and Methods

The data for the present study has been taken from the India Human Development Survey (IHDS) jointly organized by the researchers from the University of Maryland and the National Council of Applied Economic Research (NCAER), New Delhi. This nationally representative, multi topic survey was conducted during 2004-05 covering vital issues such as health, education, employment, economic status, marriage, fertility, gender relations, and social capital in 41,554 households of 1503 villages and 971 urban neighbourhoods across India. The survey provides information on consumption of food, non food, education, healthcare, rent, income and other aspects with a reference period of 365 days and 30 days before the date of survey.

This paper attempts to study the healthcare expenditure patterns with emphasis on intra-household transfers in Kerala in terms of proportion of senior citizens and source of income. The sample covers 2078 households with 7980 individuals in 14 districts of Kerala. Age profiles of consumption and production are viewed from the individual standpoint rather than from that of a household in this study.

Households shift resources among their members. Inter-household transfers are between household heads, whereas intra-household transfers are between the head and the other household members (and not between members). Those who consume more than their disposable income receive intra-household transfers from those who consume less than their disposable income. Disposable income is defined as labour income plus net public cash transfers (cash inflows less taxes) plus net inter-household transfers. In some households, the combined disposable income of all the members exceeds the combined total consumption of all the members. The surplus is then transferred to the household head and saved. In other households, total disposable income is less than the total consumption and they support some part of their consumption using property income or if necessary, by dis-saving. This portion of the deficit is financed by additional intra-household transfers from the household head to household members.

Allocating consumption to individuals is a challenging task, because expenditure data are collected more for households than for individuals. Intra-household transfers by age are particularly difficult to estimate because most of the data collected in large scale consumer expenditure surveys is only at the household level. Few studies have attempted to study the pattern of allocation of consumption expenditure between adults and children, and the sex wise allocation between prime age adults and

the elderly. This issue is especially important in India where most of the elders live with their adult children.

Some goods are jointly consumed and allocating consumption to individuals inevitably involves arbitrary rules. From the household perspective, production and consumption are attributes of households, varying with the age of the household head. Constructing production and consumption profiles is more straightforward but trade-offs are involved. While calculating intra-household transfers, one important assumption needs to be made to enhance the quantification of intra-household transfers in order to suit the data constraints and simplify calculations – *all saving and dis-saving is done by the household head.* Other members with disposable income exceeding their consumption transfer the surplus to the head, who either redistributes it to others or saves it. In other words, every household has only one head who owns all the household assets and thus all income generated by those assets flows to the head, which he redistributes among other members.

In this paper, intra-household transfers are computed at the micro-level and aggregated to construct the age profiles. Detailed consumption expenditure related to food and non-food items at the household level has been used with a special focus on expenditure on education and healthcare. For education, information on expenses such as school fees, books, uniforms, private tuition charges for the household members in each age group currently enrolled in the school for the preceding year has been used. Similarly, in the case of healthcare, information on expenses such as medical fees, medicines, hospital charges etc. for household members who have taken some form of treatment in either private or public sources for the preceding month of survey in the case of short term morbidity, and for the preceding year in the case of major morbidity is used.

Lee et al., (2008) have allocated education and health expenditure to members using a regression method similar to the one employed by Attanasio et al., (1999). The total household expenditure on education is regressed on the number of household members for each individual age enrolled in the school and the number of household members not enrolled, with the intercept suppressed. Private health expenditure is allocated using a similar regression approach, using the number of household members taking private medical service for each age as regressors. However in this study, since the data provides individual level details, allocation of education expenditure has been done directly by using identity codes for the household members for each individual age enrolled in the school and the number of household members not enrolled. Private health expenditure is allocated at the individual level using a similar approach, using the number of household members taking private medical service for each age. For some ages, private health spending might be very low and so the estimated coefficients may be negative. To avoid this, health spending can be constrained to be non-negative. The other (food and non-food) household consumption is allocated using an ad-hoc allocation rule

used by Deaton and Paxson (1997) which is based on an extensive literature review. He suggests that children aged 0-4 years be counted as 0.4 of an adult, those aged 5-9 as 0.5 and children aged 15 and older as 1.We employ a more continuous but similar equivalence scale which is equal to 1 for adults aged 20 or older, and which declines linearly from unity at age 20 to 0.4 at age 4 and below. Using these methods, we estimate sex wise consumption for every individual in each household in the sample. We average across all the individuals of a given age in the survey to construct age and sex specific private expenditure on education, health and other items. To calculate the intra-household transfers, estimates of consumption, labour income, public cash transfers, taxes and inter-household transfers for each individual in the household need to be calculated. More detailed information on the definition of key variables and the methodology is available on the project website, http://www.ntaccounts.org

Findings and Discussion

Two frequently used terms in the discussion are 'in-transfers' and 'out-transfers'. The intra-household transfers which are received by individuals to meet their consumption needs are referred to as the 'in-transfers', while contributions by members of households to support other members in the family are termed as 'out-transfers'. Using the above methodology, in- and out-transfers for individual ages by sex have been studied along with the income and consumption patterns.

The smoothened average aggregate annual income graph for individual ages (Fig.1) depicts the income of 7883 persons in Kerala. The peak is around the age of 43 years with a declining trend thereafter. The sex-wise percentage share structure of aggregate annual income (Fig.2) clearly shows that the overall income share is considerably higher for males as compared to females. The maximum share comes from the prime working age group 40-50 years closely followed by 30-40 years for both the sexes. It may be noted that in case of males, the share of 60 plus population in the sample cannot be considered negligible (it is around 13 percent). Perhaps, this is because even at later ages, the elderly citizens of Kerala particularly males may possess some income options such as remittances, pension and property or they may continue to work as agricultural labourers to earn their livelihood in case of the lower income strata.

Fig. 1 here: Average annual income (in Rs.)

Fig.2 here: Sex-wise percent share of average annual income.

The healthcare needs of the two extreme age groups, that is, 0-14(children) and 60 plus (elderly) are invariably greater than those of the rest of the population. If we plot income versus healthcare consumption in Kerala (Fig. 3), the right half of the graph clearly shows that there is a considerable gap between income and healthcare consumption for the 60 plus population.

Fig. 3 here: Aggregate annual income and healthcare consumption (in Rs.)

For these strata of the population, the healthcare needs increase continuously with age, while the income levels go on diminishing. The obvious question would then be – who supports the major healthcare expenses of the elderly citizens? In other words who plays the role of the donor group for these elderly people in Kerala?

A number of factors, besides socioeconomic ones, have contributed to the enhanced health awareness of the people in Kerala such as improved social living conditions of the landless poor in the rural areas which have contributed to the alleviation of poverty among agricultural labourers, widespread literacy, especially female literacy and the universally available public health system. Kerala has a three-tier system of healthcare distributed evenly in urban as well as rural areas--Primary Health Centres (PHCs) and Community Health Centres (CHC), Tahsil and District Hospitals and Medical Colleges. Apart from modern medicine, Indian Systems of Medicine, such as, Ayurveda, Homeopathy and other alternative systems are popular in Kerala.

If the total average consumption together with average in-transfers and out-transfers for healthcare for individual ages are plotted (Fig. 4), it can be clearly seen that up to 18 years, the total average consumption and the average in-transfers coincide. The gap between the two is very narrow till the age of 30 years, thereafter increasing with age. This indicates that most of the healthcare consumption is taken care of by the intra-household in-transfers and not by public services in the study population.

Fig. 4 here: Consumption, In-transfers and Out-transfers for healthcare (in Rs.)

Detailed figures are given in the appendix (Table 1 and 2).

Fig. 5 here: Percent share of average annual In-transfers and Out-transfers for health.

The average annual in-transfers for health show a j-shaped curve. On an average the highest, that is, 21 percent can be assigned to the age group 80-90 followed by the age groups 70-80 and 0-10 (15 percent). This indicates higher share of healthcare expenses belong to the senior citizens along with the children below 10 years of age. The annual out-transfer share on an average is the highest (29 percent) in the age-group 50-60, followed by 40-50 (23 percent). Fig. 5 depicts the detailed percentage share structure of the average annual in- and out-transfers for healthcare in Kerala.

To understand the sex-wise pattern of health transfers, the smoothened values of the average annual intra-household in-transfers for health for individual ages have been plotted separately for both males and females. The picture shows quite a dis-similar trend for the two sexes. In the case of males, the in-transfers are highest in the initial years after birth, after which a declining trend is observed. A bulge

can be seen in the formative and growing ages, between 16 and 25 years, whereas, from the working ages onwards, the in-transfers remain more or less the same up to early 60s. From then onwards, the direction of the graph changes to show an increasing trend which continues till the late years. In the case of females, the graph begins with an initial low and a bulge at childhood ages. Similar high bulge can be observed around the reproductive period of the woman, that is, 18 to 35 years. Thereafter, a continuously increasing trend can be seen due to heavy health expenditures during the menopausal ages till the late seventies, beyond which the in-transfers again decline (Fig. 6).Overall, the in-transfers for females are considerably higher than those for males. This may be because a woman passes through many health related aspects particularly menarche, pregnancy, delivery and menopause through her life incurring substantial medical and healthcare costs at every stage.

Fig. 6 here: Intra HH (household) sex wise average annual In-Transfer for Health (in Rs.)

Fig. 7 here: Intra HH sex wise average annual Out-Transfers for Health (in Rs.)

The sex wise average annual out-transfers (Fig.7) for individual ages sharply show more out-transfers from males than from females. In case of males, the out-transfers begin at the prime working age of about 30 years and are high throughout the middle span of 40-60 years. From then onwards the out-transfers decline, though some out-transfers may also be seen in the age group 60-70.In the oldest old age group (80 plus), the out transfers again become negligible. Kerala has one of the highest mean ages at marriage in the country (males 28 years and females 23 years). At around the age of 35, working couples have to balance the outflow of their income between educational expenses of their children and healthcare expenses of their aged parents. Some out-transfers may be observed for females but around the age of 50 and then from 60 onwards. This may be because after working for a few years, they utilize their savings for the healthcare of elderly parents and/or in-laws; in the case of widows, may divert their spouse's funds to household expenses.

The educational scenario in Kerala is better than that in other states in India. As per the reports of 2001 census, Kerala has a literacy rate of 90.92 percent. The schools in Kerala belong to three categories, those which are government funded, those managed by private trusts and those managed by private but unaided organizations.

If the total average consumption and the average in-transfers and out-transfers for education for individual ages are plotted, it is evident that the consumption for education and the in-transfers coincide (Fig. 8). This strongly indicates that most of the educational consumption is taken care of by intra-household transfers. This may be true in the case of growing educational expenses particularly for private convent schools. Detail figures are given in the appendix.

Fig. 8 here: Consumption, In-transfers and Out-transfers for Education (in Rs.)

Out of the total in-transfers, on an average the highest, that is, 63 percent can be assigned to the age group 10-20 years followed by the below 10 age category (20 percent). There are many factors that influence this trend. Consistent low fertility rates, high literacy particularly female literacy, visible improvement in the socioeconomic condition of middle class parents, the small family norm of having one or two children, the yearning to provide them with the best quality of education in expensive private convents and private colleges, and increasing educational costs, all contribute to the rising in-transfers for education. According to Arokiasamy and Retnakumar (2006) fertility decline is associated with a downward trend in enrolment in government-funded schools and an upward trend in private un-aided (PUA) schools.

The out-transfer share for education on an average is the highest (30 percent) for the prime working age-group 40-50 followed by the 50-60 age group (22 percent). It may also be noted that unlike health, total out transfers from the elderly group (60-90 years) add up to around 42 percent. This may be attributed to a number of reasons:

- Firstly, the share of income is not negligible in the age group 60-80 in Kerala. Those grandparents, who have either agricultural earnings or income in the form of pension or through property, may be transferring some share of their earnings for the purpose of education of their grandchildren.
- Secondly, in households where the middle generation, particularly the males have out-migrated or emigrated may be sending the money in the form of remittances to their old parents who invest it in their grandchildren's education.

Fig. 9 depicts the detailed percentage share structure of the average annual in- and out-transfers for education in Kerala.

Fig 9 here: Percent share of average annual In- and Out-transfers for education

As far as sex wise aggregate annual intra-household transfers for education are concerned (Fig.10), it can be clearly seen that the in-transfers in the case of males are higher than those of females. In both cases, they are concentrated in the age group, 5 to 22 years with peak around 18 indicating substantial cost for higher education in colleges and universities as compared to school education.

In the case of out-transfers for education, again there are more out-transfers from males than from females (Fig.11) though at some ages in the prime working period and post 60, there are out-transfers even in the case of females. Out-transfers even at the later ages for males indicates that grandparents are actively involved in the educational expenses of their grandchild/children. This may be particularly true in those households where either the grandparents are still working or where the parents, specifically the father has moved out of the house for work, or where the children are living with their grandparents who utilize the remittances sent to them to meet the educational expenses of their grandchildren.

Fig. 10 here: Intra HH sex wise average annual In -Transfers for Education (in Rs.)

Fig. 11 here: Intra HH sex wise average annual Out- Transfers for Education (in Rs.)

Summary and Conclusions

With meagre generic public healthcare options and a rapidly increasing elderly population, intra-household allocation seems to be an economically viable source of support for meeting the healthcare expenditures of elderly citizens in India. Kerala has been ahead of the country in the demographic path and so the experience of Kerala is instructive for the rest of the country. While attempts have been made to estimate household consumption and transfer behaviour in India at the aggregate level, there has been no such attempt at the individual level. This is partly because of the unavailability of data on intra-household consumption and transfer mechanisms.

Certain assumptions need to be made before applying the methods used at the macro level to the micro data to enhance the quantification of intra-household transfers and to simplify the calculations– all the saving and dis-saving is done by the household head. This assumption may not be practical at the individual level. One of the important findings of this study is that although the income of the old and the oldest old is not negligible, there seems to be a wide gap between the healthcare consumption and income of this group. The maximum share of income comes from the males in the prime working age groups, 40-50 and 50-60 years. The in-transfers related to healthcare are predominantly in the age group 60 to 90 years. In the case of females, a bulge is observed around the reproductive period, that is, between 18 and 35 years, and then with initial decline, the in-transfers show an increasing trend till the late years; this is due to considerable health expenditure of elderly females. The healthcare related out-transfers are more pronounced among males in the middle prime working age groups of 35 to 60 years. This indicates that the working age group in the household is primarily responsible for supporting the healthcare expenditures of the elderly. About 28 percent out-transfers for healthcare come from the age group 60-80.This indicates that the elderly themselves may also be in a position to take care of their own as well as their spouse's health expenditure in some cases particularly those who are earning themselves.

The sex wise intra-household transfers for education clearly show that the in-transfers for education in the case of males are higher than that of females. The in-transfers for education are substantially high (more than twice) in the age group 10-20 as compared to the initial ages. This may be attributed to the heavy educational expenses in the much preferred un-aided convent schools and colleges in Kerala. The out-transfers for education are maximum in the prime working age group of 40-60 years. An important point to note is that unlike health, total out-transfers from the elderly group (60-90 years) adds up to around 42 percent. These out-transfers for education even in the late years may indicate active support of the grandparents in sharing the educational burden of their grand children either through their own earnings or through the remittances sent by the migrants of that household.

Another striking finding of this study is that the gap between healthcare consumption and in-transfers for healthcare is not much, although it increases with age. This clearly indicates that intra-household transfers play a major role in meeting the healthcare consumption needs in Kerala which in turn, reflects the insignificant role of government policies and interventions for healthcare. Thus, it can be seen that the major burden of the support for elderly healthcare is still on the family. This raises a question that with declining fertility in Kerala and high rates of out-migration or emigration of the Keralite males, in days to come, will family erosion affect the support system for the elderly? In that case who will share the burden of rising healthcare expenditure? Will the intra-household transfers get replaced by the government interventions? With the increasing number of emigrants bringing in considerable amount of remittances, will the gap between income and healthcare expenditure, particularly for the 60 plus decline?

States like Kerala (which have already done well in elementary education), seem to earmark a portion of responsibility for further promotion to private (non-government) schools. With the State spending 29.5 per cent of its budgeted expenditure and 7.5 per cent of its State Domestic Product [SDP] for education in 1993-94 [MOHRD, 1994], Kerala's public resources are heavily committed to education. In 2003-04, the per capita government expenditure for health was Rs.236 and that for education was more than four times, Rs.911. Thus, with declining family support in the near future, the government must consciously make attempts to divert funds for the healthcare of the growing proportion of the elderly so as to relieve the burden on intra-household transfers within families.

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Appendix

1. Tables

Table 1: Average Consumption, In-transfers and Out-transfers for Health-care Expenditures in Kerala (in Rs.)

	Health(Aggregate)		
Age groups	**Average consumption**	**Average In-transfer**	**Average Out-transfer**
Total(Unsmoothened)	**178089**	**101109**	**-102961**
0-10	6738	6595	-2
10-20	3322	3195	-13
20-30	2269	1741	-521
30-40	2840	1941	-3957
40-50	6398	2981	-4585
50-60	11691	5102	-4969
60-70	15070	5845	-4305
70-80	16318	6536	-2835
80-90	19756	9184	-1378

Table 2: Average Consumption, In-transfers and Out transfers for Expenditure on Education in Kerala (in Rs.)

	Education(Aggregate)		
Age groups	**Average consumption**	**Average In-transfer**	**Average Out-transfer**
Total(Unsmoothened)	41534	40239	-43563
0-10	7721	7687	0
10-20	18856	18783	-3
20-30	2481	2453	-345
30-40	0	0	-4062
40-50	0	0	-11638
50-60	0	0	-6910
60-70	0	0	-5617
70-80	0	0	-6323
80-90	0	0	-6066

2. Figures

2.1 Income

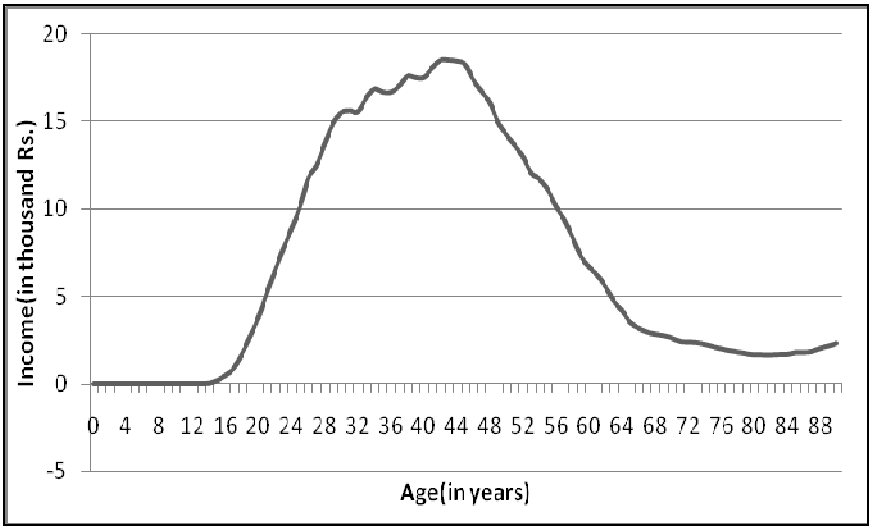

Fig 1: Average aggregate annual income (in Rs.)

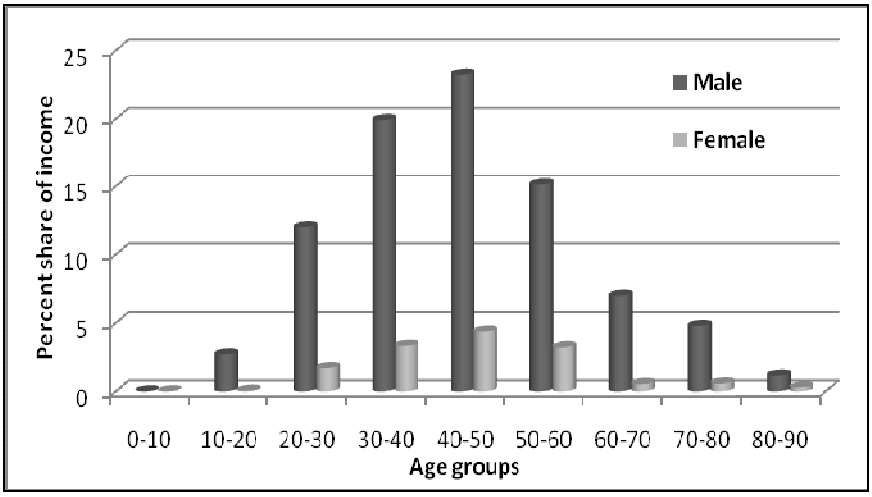

Fig.2: Sex-wise percent share of average annual income

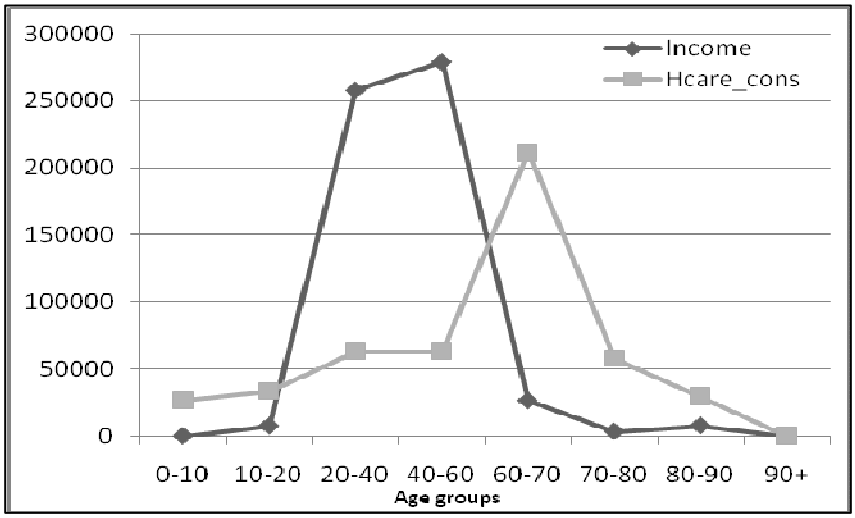

Fig 3: Aggregate annual Income and Healthcare consumption (in Rs.)

2.2 Healthcare consumption and transfers in Kerala

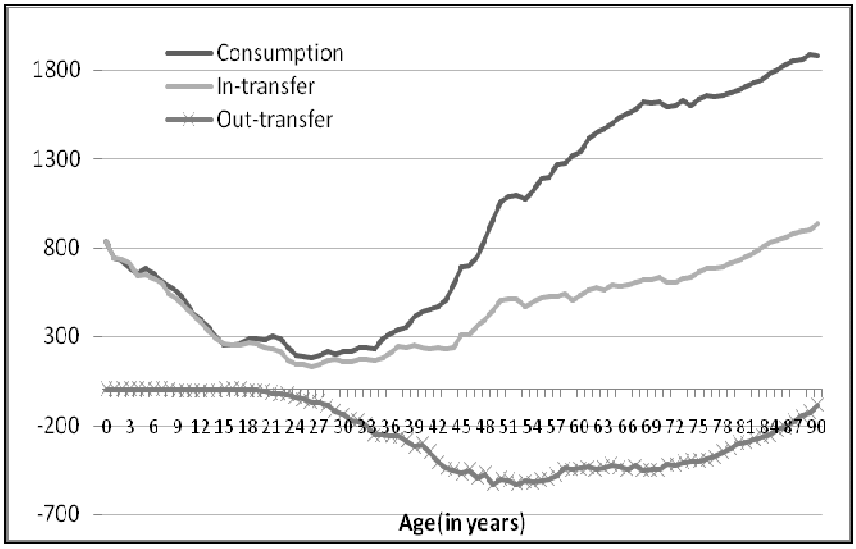

Fig 4: Consumption, In-transfers and Out-transfers for healthcare (in Rs.)

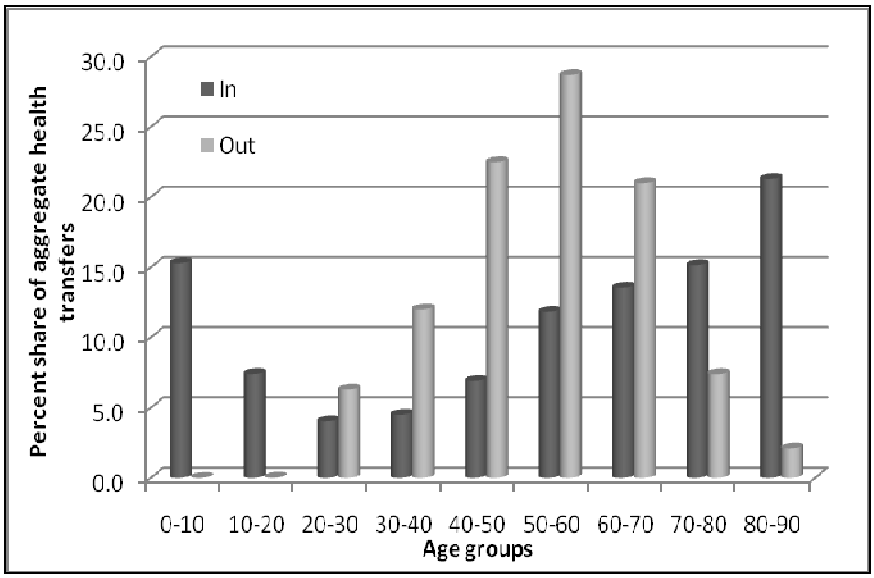

Fig 5: Percent share of average annual In-transfers and Out-transfers for Health

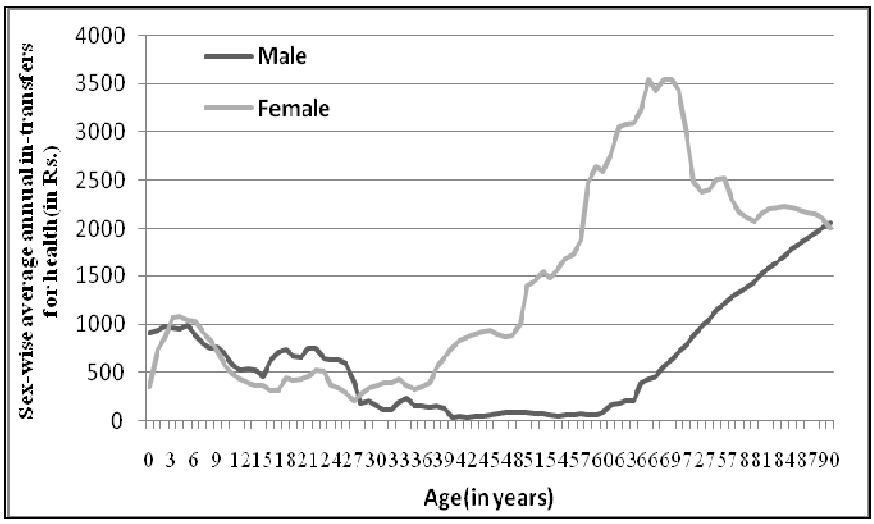

Fig 6: Intra HH Sex wise average annual In-Transfers for Health (in Rs.)

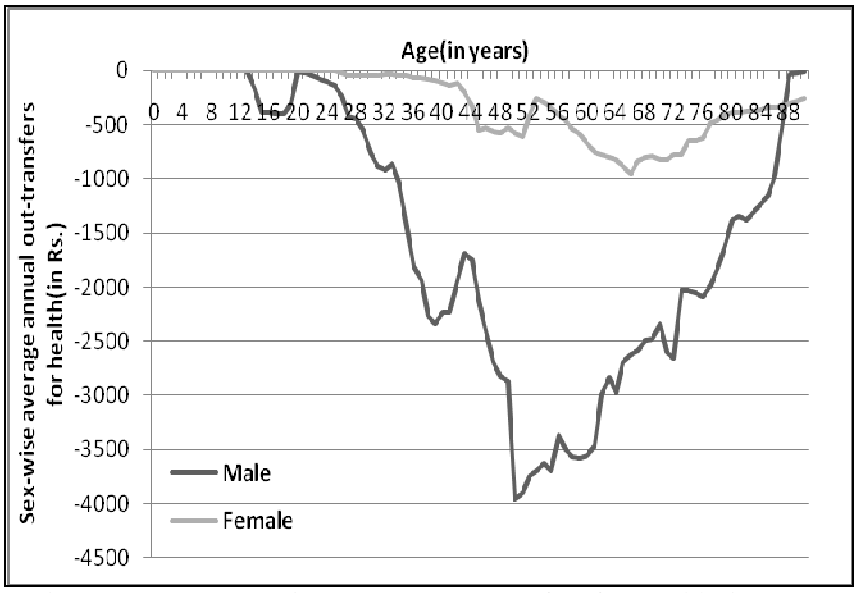

Fig 7: Intra HH Sex wise average Out-transfers for Health (in Rs.)

2.3 Educational consumption and transfers in Kerala

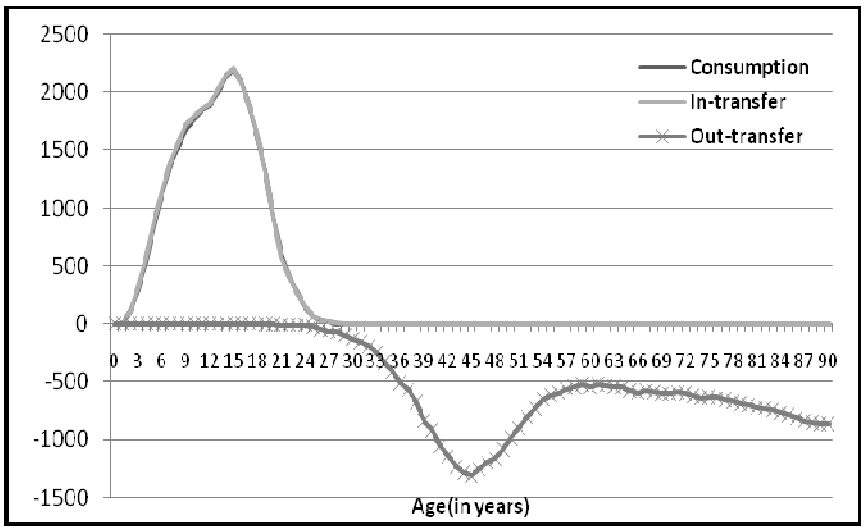

Fig 8: Consumption, In-transfers and Out-transfers for Education (in Rs.)

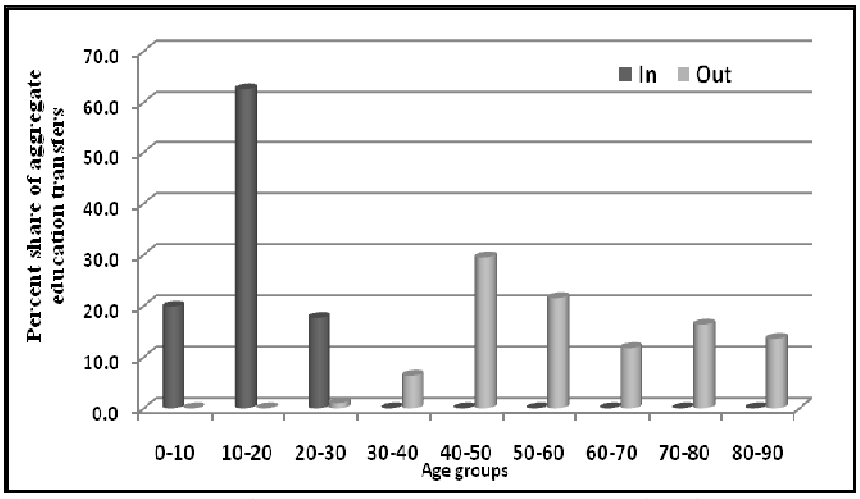

Fig9: Percent share of average annual In and Out-transfers for Education

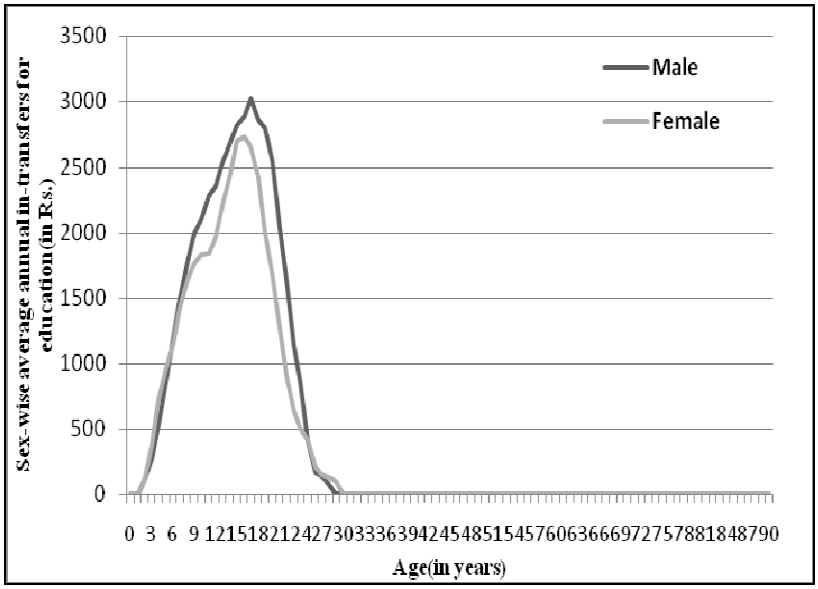

Fig 10: Intra HH sex wise average annual In-Transfers for Education (in Rs.)

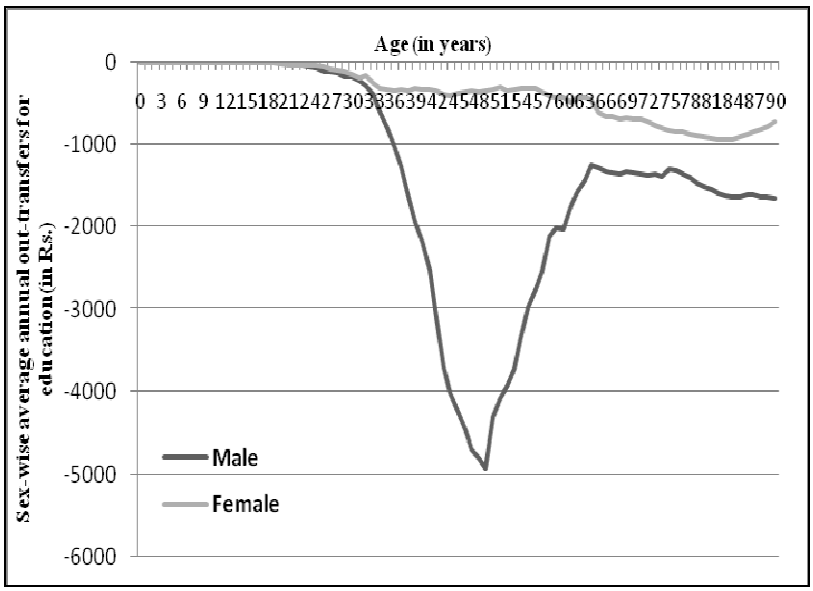

Fig11: Intra HH sex wise average annual Out-Transfers for Education (in Rs.)