

## DEMOGRAPHIC CHARACTERISTICS OF POOR HOUSEHOLDS IN URBAN ETHIOPIA: THE CASE OF DIRE DAWA TOWN

Yohannes Kinfu<sup>1</sup>

*Abstract:* The paper presents evidence on the links between poverty and demographic variables such as marriage patterns, household size and composition, fertility and mortality experiences, perception and preferences for children and also knowledge, attitude and practices of family planning, using household level data for Dire Dawa in the early 1990s. The study first identifies the poor using a subjective poverty line and then assesses their demographic characteristics. The results indicate that the poor have large family size, high dependency of children and high fertility. However, compared to others, poor households wished to have fewer children (and most of them also need no more additional children) which the study interpreted as a behavioral response to the increasing costs of children. However, the study found out that most of these women had limited knowledge of family planning methods, and even those who know about it had rarely practiced it. The results also show that, as one would expect, death rates were consistently higher among the poor and lower among the well-off.

### 1. INTRODUCTION

Like in several other developing countries, poverty is a major social and economic problem in Ethiopia. Current studies show that roughly over half of the country's population lives in abject poverty (MOPED, 1994). Problems of poverty are multi-dimensional and hence have multiple sources. In the case of Ethiopia, poor economic performance, rapid rate of population growth, low technological base, periodic drought and famine, and internal displacement have continued to exacerbate poverty.

Poverty affects people of different characteristics in different ways, because they play different roles, have different needs and face different constraints. It is most likely that households in extreme poverty differ from the average and non-poor households in several distinct ways such as in demographic characteristics and other socio-economic conditions. Proper understanding of these characteristics and conditions constitutes an essential starting point and is a key to the formulation of policies and practical steps that the Government can take in order to alleviate poverty and promote sustainable growth.

The aim of this paper is to present evidence on the links between poverty and demographic variables such as marriage patterns, household size and composition, fertility and mortality experiences, perception and preferences for children as well as knowledge, attitude and practices of family planning, using data for Dire Dawa in the early 1990s. Dire Dawa is one of the largest industrial and commercial centres in the country. Thus, there are reasons to believe that the existence of diversified social groups and, hence, pronounced disparities in economic status among the residents of the city makes the research area ideal to understand the nexus between poverty and demography in an urban setting.

## 2. CONCEPTS AND MEASUREMENTS OF POVERTY

According to the literature on the subject, poverty is said to exist in a given society when one or more persons do not attain a level of material well-being deemed to constitute a reasonable minimum by the standards of that society. Hence, the starting point in any poverty study is the question of how one measures or assesses well-being and based on that at what level of measured well-being does one classify that a person as poor or non-poor.

There are a number of alternative indicators that may be used to quantify well-being or welfare at individual or household levels. These include per capita or per household income, consumption, and food expenditures; nutritional and anthropometric indicators, proportion of household budget spent on food, known as food ratio; basic needs and so on. Given the strengths and setbacks of each of the indicators as a measure of welfare, the choice from among them largely depends on the nature of the available data and the objectives of the study. But still, selection of a particular welfare indicator does not by itself give a definition of poverty. Since defining poverty consists of classifying the population into poor and non-poor, a decision has to be taken where to draw the poverty line to transform welfare indicators into definitions of poverty.

The poverty line is a cut-off living standard level below which a person is classified as poor [10]. In setting a poverty line three alternative approaches can be followed. These are absolute, relative and subjective poverty levels.

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The poverty line is a cut-off living standard level below which a person is classified as poor [10]. In setting a poverty line three alternative approaches can be followed. These are absolute, relative and subjective poverty levels.

An absolute poverty level is one which is fixed in terms of the living standard indicator being used, and fixed over the entire domain of the poverty comparison [7]. The most usual practice in setting an absolute poverty level is to estimate the cost of a bundle of goods (both food and non-food) deemed to assure that basic needs are met in the specific domain of the poverty comparison. In most developing countries, absolute poverty lines have been set based largely on food expenditure necessary to attain some recommended food energy intake and in some cases, including essential non-food requirements. Similar procedure was, for instance, followed by Dercon, Krishnan and Abdulhamid (1994) in their study of rural poverty in Ethiopia.

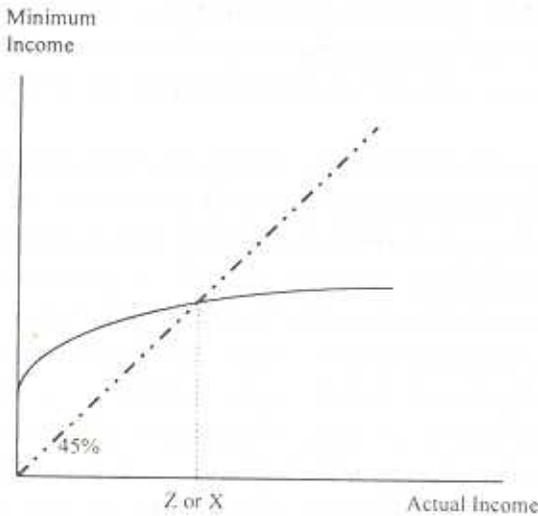
The method, however, has some shortcomings. According to Ravallion [7], the major pitfall relates to determining the minimum food energy requirement, which can vary across individuals and over time for a single individual. In addition, the procedure is more of measuring food poverty. But, as noted by several writers attaining adequate nutrition is not the sole motive for human behaviour, even for the poorest; nor is it the sole motive in food consumption.

An alternative way of setting a poverty level is using what is called a relative poverty line concept. The procedure involves disaggregating the population into various income or expenditure (or any preferred well-being indicator) percentiles and, then subjectively labelling the lowest 'x' percentage of the population as 'the poor'. Once this is done, one may use the corresponding income or consumption level for this percentile as the poverty line for comparison with other groups, dates or places (Glewwe and Twum-Bahaa, 1991). First and foremost, of all the methods, this technique is entirely dependent upon the value judgement of the researcher. In addition, it is not clear whether the method is an indicator of poverty or a measure of income inequality, which may mean two different things in developing societies. Moreover, as argued by Ravallion [7] such a method is technically feasible only for developed countries. This is because the basic assumption of the method that poverty line is a constant proportion of the mean and thus the elasticity of the poverty line with respect to the mean is unity, is only true amongst the industrialised countries.

The third variation is to define poverty based on survey responses to an attitudinal question such as the following:

What income level do you personally consider to be absolutely minimal? This is to say that with less you could not make ends meet [7].

The poverty level set on the basis of such an approach is called the subjective poverty line. This approach explicitly recognises that poverty lines are inherently subjective judgements people make about what constitutes a socially acceptable minimum standard of living in their own societies. Studies that have made use of this procedure found the relationship between actual income and what is considered as the minimal income to be an increasing function as shown in the following graph (Kapteyn et al., 1988). "The point 'x' or 'z' in the figure is a good candidate for a poverty line; people with income above x or z tend to feel that their income is adequate, while those below x tend to feel that it is not" [7].



Due to the minimum element of subjectivity involved in the procedure (at least from the side of the investigator) and its special relevance to the study objective, this method was used to identify the poor and measure well-being in the present study. The discussion on the application of the method and its relevance in relation to the nature of the data will immediately follow the discussion on the sources of data.

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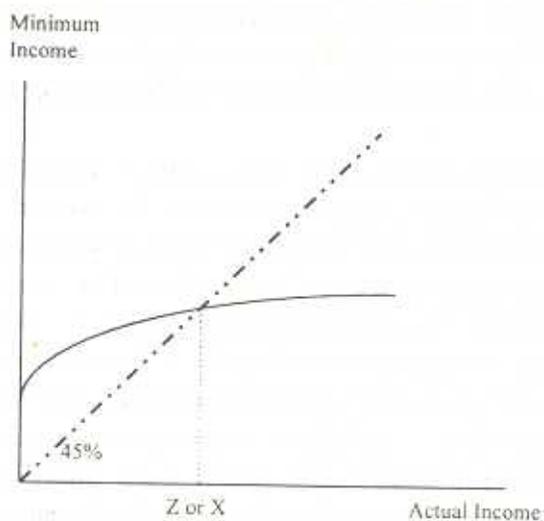
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### 3. SOURCES AND NATURE OF DATA

The study was based on a cross-sectional single period survey data collected from a sample of households in Dire Dawa in 1994 by the Demographic Training and Research Centre of Addis Ababa University. The sample was obtained on the basis of a two-stage simple random sampling procedure. At the first stage, out of the 23 *kebeles* in the town a sample of nine were chosen. And from these *kebeles*, in the second stage 2,000 households were randomly drawn, though only 1,899 households were successfully interviewed (see Table 1). Finally, appropriate weighting procedure was applied on the sampled data in order to ensure the overall selection of a representative sample.

Table 1: Numerical and Percentage Distribution of Sampled Household by Kebele, Dire Dawa 1994

Sampled Kebeles	Sampled households	Number of respondent households	Response rate	Weighted responses	
				No.	% share
02	145	123	84.8	1769	13.96
03	265	251	94.7	1231	9.71
04	142	122	85.9	1240	9.78
05	225	219	97.3	1415	11.16
07	261	251	96.2	1391	10.97
09	275	269	97.8	1170	9.23
10	155	137	88.4	493	3.89
11	230	230	100.0	1834	14.46
12	302	297	98.3	2138	16.86
Total	2000	1899	94.9	12681	100.00

\* In this study, a household is defined as a group of people who have a common source of major income, who share a common source of food and who sleep under the same roof.

The content of the survey data is reasonably comprehensive by most standards. Data on the economic status of the household were collected in several forms. These included data on household income and expenditure, possession of household items (such as car, TV, radio, telephone, refrigerator, tape-recorder, air conditioner, etc.), house tenure status, materials used for construction, sources of fuel, type of toilet and an attitudinal question on the adequacy of household income. The consumption data covered all monetary expenditures on goods and services consumed plus the monetary value of all consumption from income in kind such as food

produced on the family farm and the value of owner-occupied housing. Similarly, the income definition included personal income in cash and in kind, remittance from children and others and other sources of income, such as the monetary value of children's activity in family business. Apart from data concerning wealth (i.e., household possessions), the period of observation for all income and expenditure related data referred to a single month. Information on the details of the breakdown of consumption of food and non-food items was not collected.

#### 4. IDENTIFYING THE POOR AND POVERTY PROFILE

In this study, attitudinal question concerning household income and welfare was measured by using the subjective poverty line approach. The following question was used and responses from all households were recorded on the basis of four possible pre-coded non-numeric responses provided along with the question:

In your opinion is the household income sufficient to make the family's ends meet?

- |                              |                           |
|------------------------------|---------------------------|
| (i) Inadequate or too little | (ii) Moderate             |
| (iii) Sufficient             | (iv) More than sufficient |

Except for the response for one household which was reported in the last category and later merged with the welfare group immediately below it (i.e., the sufficient category) at the analysis stage, the remaining responses were maintained as they were reported, and considered as indicators of self-declared welfare status. Accordingly, three welfare categories were identified: those who reported their earnings to be inadequate or too little are renamed 'Poor'; those who considered their income as 'Moderate' and, those who regarded their own incomes as 'Sufficient'.

Below a brief comment on the major advantages of the procedure is given. The first relates to the validity problems related to the conventional measures of welfare (such as income or expenditure) in relation to the study objectives. As it may be noted, most of the demographic variables that will be investigated in the study (such as marriage, fertility and mortality) are life-time events whereas data on either monthly expenditure or monthly income, which are often used as measures of well-being, in the strict sense, are current status indicators and are also more likely

to vary over time. Therefore, the major advantage of classifying the population based on self-reported welfare status is that it is less likely to be affected by such problems, since it does not explicitly involve a specific time element.

The second reason that necessitated the use of the subjective poverty level approach, on the other hand, emanated from recognition of problems that might possibly emerge from problems related to the quality of the income and expenditure data. Like the case in many related surveys, if the data, by any chance, suffer from poor responses and if these are also systematically correlated with true levels of well-being, using such data for any type of analysis is likely to lead to erroneous conclusions. Thus, the best thing that can be done is to make use of less of such data and depend more on information that do not directly involve numerical estimates, such as the attitude question.

Table 2: Selected Living Standard Indicators by Self-declared Welfare Groups for Sample Households, Dire Dawa, 1994

Indicator	Self-declared welfare group			All Dire Dawa	F-ratio	Significant pairs at 5% level (Scheffe Test)
	Poor	Moderate	Sufficient			
Household monthly expenditure	277.38	487.21	796.63	360.00	1424.66	All
Household monthly income	313.58	645.54	1552.47	468.75	1786.91	All
Per capita monthly expenditure per adjusted adult equivalent units	69.08	121.63	189.83	89.23	1261.07	All
Per capita monthly income per adjusted adult equivalent units	77.77	160.22	368.63	115.20	1687.70	All
Food expenditure as a percentage of total expenditure	81	67	62	76	12.06	(1,2) (1,3)*

\* 1 stands for poor 2 represents moderate and 3 stands for sufficient.

Source: Author's calculations based on Fertility and Family Welfare Survey data, DTRC, AAU.

Lack of relevant data from the survey was also an additional reason that motivated the use of the subjective poverty line approach. For instance, as duly noted earlier, the procedure of setting an absolute poverty level, apart from information on household monetary expenditure, requires data on food and non-food items consumed at the household level. It also needs information on prices of commodities prevailing in the study area. Even though price data could be obtained from secondary sources, data on items consumed by the household, was not collected in the survey

being used. This limits the application of an absolute poverty line approach, even if one wishes to do so.

To help assess how robust were the welfare groups identified based on self-declared responses in relation to conventional indicators, they were compared with selected alternative welfare measurements as shown in Table 2.

## 5. DEMOGRAPHIC CHARACTERISTICS OF POOR HOUSEHOLDS

Interrelationships between population and poverty can be viewed at different levels and from several perspectives. Perhaps the most common approach is macro-level analysis, which looks into the pressure of growing population on resources such as social services, investment and natural resources. However, many of the interactions between population and poverty originate, or are felt most strongly, at the micro-level, that is at the level where fertility related decisions are made, and where the effects of poverty on mortality are absorbed. In this section, we shall examine the relationships between selected demographic variables and standard of living, with emphasis on the poor households. Nevertheless, it should be noted that observed associations do not necessarily imply causation.

### Marriage and Household Composition

Although marriage is the predominant context for childbearing and rearing all over the world, the structure and the customs, prevalence and stability as well as age at marriage vary from country to country and within country between social groups. Table 3 provides comparison of mean age at marriage between the different categories of the study population.

Clear pictures of association emerge between welfare and age at marriage in the study area. It appears that average age at first marriage tends to be relatively higher among those respondents in the higher welfare category followed by those in the moderate group; it was the least for the poor households. However, from the results of the F-test, it was noted that these differences were statistically significant only for females. In addition, the results of the Scheffe test also indicated that, even for females, pairwise differences in mean age at first marriage were significant only

between the poor and the sufficient group and between the moderate and the sufficient group. No significant difference in age at first marriage was noted between the poor and those who declared themselves as moderate. Thus, in general the results of the analysis suggested that women in poor and moderate households were more likely to marry earlier than their counterparts in the sufficient category.

**Table 3: Family Formation and Household Structure Indicators by Self-declared Welfare Groups, Dire Dawa, 1994**

	Self-declared welfare group			All Dire Dawa	F-ratio	F Prob	Significant pairs at 5% level (Scheffe Test)
	Poor	Moderate	Sufficient				
Age at first marriage							
Males	27.72	27.78	28.35	27.80	1.34	0.2630	---
Females	19.70	19.85	20.71	19.80	15.00	0.0000	(1,3) (2,3)*
Mean spousal age difference	8.07	7.87	7.62	8.00	1.86	0.3057	---
Mean household size	6.34	5.9	5.10	6.27	9.28	0.0001	All
Average age of head of household	46.0	45.6	46.2	45.7	15.65	0.0915	---
Ratio of children to adults	1.1292	1.0442	0.8921	1.09	30.47	0.0000	All

\* 1 stands for poor / 2 represents moderate and 3 stands for sufficient.

Source: Author's calculations based on Fertility and Family Welfare Survey data, DTRC, AAU.

Education can be one possible reason that explains the differences. For instance, as noted from the survey data, female school attendance was both universal and prolonged among the well-to-do group in contrast to women in poor and moderate households. Other things being equal, the longer years of schooling probably might have acted as a cause for delayed marriage among the women in the sufficient category and the other way round for women in moderate and poor categories.

The differences in age at first marriage observed among the different groups of the population could have far-reaching demographic implications, some of which are poverty-related. For instance, if the poor have limited knowledge of and access to family planning, as will be demonstrated in the following sections, early marriage implies longer exposure to childbearing,

and hence high fertility. In fact, this argument fairly agrees with the finding shown in the same table that the poor households in the study area were characterised by both large household size and high proportion of dependants. As can be observed from Table 3, the average poor household had at least one additional member compared to an average household in the sufficient category and about half a person compared to moderate households. Similarly, as shown by the child-adult ratios in the same table an adult in a poor household was expected to care for himself and support an additional 1.13 dependants as compared to less than one for the sufficient group. Overall and pairwise differences in average household size and proportion of dependants, as tested by the F-ratio and the Scheffe test respectively, were all statistically significant at the specified levels. The potential effects of such high dependency among the poor goes far beyond the immediate implications. With increasing withering away of subsidies in the social service sectors, such as education and health, the poor would be in a much difficult condition to send their children to school and provide them with the necessary health-enhancing goods and services. And, the lack of such opportunities implies the possibility of inter-generational poverty transmission.

#### **Achieved Fertility**

A substantial volume of empirical as well as theoretical work has, for over three decades, explored the determinants of fertility at the household level. Among behavioural factors found to be associated to fertility, many are closely related, in one way or the other, to poverty indicators.

The data from the present study, shown in Table 4, also convey clear inverse association between well-being and fertility, as measured by mean parity. Compared to women in both moderate and sufficient categories, women in poor households consistently registered higher number of children per woman. For instance, the average parity which was in the neighbourhood of two children per woman for all welfare groups at age group 20-24 increased to about four in the age group 30-34 in the case of poor women, while it is at least less by one child for women in the same age in the sufficient category. There were, of course, some variations in the level of statistical significance of pairwise differences in observed mean parities by age cohort of mothers, as confirmed by the Scheffe test.

For the younger ages (ages less than 30 years), the differences in the observed mean values were significant only between moderate and poor and sufficient and poor, but not between moderate and sufficient categories. While for women over 40 years, the pairwise mean differences were significant only between sufficient and poor and sufficient and moderate, but not between moderate and poor women. The probable reason for the insignificant pairwise parity differences between the categories of moderate and sufficient, for the younger ages and between the poor and the moderate among older women, could be that these women probably had more or less similar characteristics in certain variables that would affect fertility.

**Table 4: Average Number of Children Ever Born by Age of Mother and Self-declared Welfare Groups for Sample Households, Dire Dawa, 1994**

Age group	Self-declared welfare group			All Dire Dawa	F-ratio	P Value	Significant pairs at 5% level (Scheffe Test)
	Poor	Moderate	Sufficient				
20 - 24	2.38	2.04	2.00	2.30	4.59	0.0118	(1,2) (1,3)*
25 - 29	3.09	2.70	2.60	2.93	11.53	0.0000	(1,2) (1,3)
30 - 34	3.84	3.60	2.94	3.74	15.41	0.0000	All
35 - 39	4.86	4.51	4.18	4.62	25.42	0.0000	All
40 - 44	6.06	5.48	4.96	5.74	28.91	0.0000	(1,3) (2,3)
45 - 49	6.69	6.56	5.75	6.61	8.42	0.0002	(1,3) (2,3)

\* 1 stands for poor, 2 represents moderate and 3 stands for sufficient.

Source: Author's calculations based on Fertility and Family Welfare Survey data, DTRC, AAU.

In the case of the middle age groups, that is between 30-39 years, the differences were, however, all significant for each of the pairs, meaning that over this age interval the fertility experience of 'poor' and 'moderate' women, 'poor' and 'sufficient' women and 'sufficient' and 'moderate' women were all significantly different from each other. In addition, the analysis also conveyed statistically significant differences in both completed and life-time fertility at all ages between poor women and women who considered their income as sufficient. Observed differences in fertility experience can be partly explained by differences in the choice available in reproductive strategy and imperfection concerning fertility control devices. Differences in the value of children and child mortality experience could also be other valid reasons. The target of household reproductive strategy is presumably surviving children. And, other things being equal, any actual or perceived mortality is, therefore, more likely to raise fertility in order to assure a certain

number of surviving children.

### Ideal Family Size and Demand for Additional Children

The relationship between standard of living and family size goals, as measured by desired number of children, observed in the study area is an interesting one with a number of policy implications. As can be seen in Table 5.a, on average, most women in the sample population wish to have less than four children; and for that matter, ideal family size has been found to be the lowest for the poor women followed by women in the moderate category. Women in the sufficient income group in contrast had the highest desired number of children, which was in the neighbourhood of four children per woman. The low family size desires among the poor could be a behavioural response to the increasing costs of children and, if properly addressed by policy makers and service providers, it would probably help to bring down expressed family size levels to the level of family size goals.

Table 5a: Mean Number of Ideal Family Size by Age of Mother and Welfare Group, Dire Dawa, 1994

Age of mother	Self-declared welfare group			All Dire Dawa	F-ratio	P Value	Significant pairs at 5% level (Scheffe Test)
	Poor	Moderate	Sufficient				
20 - 34	2.78	2.99	3.77	2.89		0.0000	(1,3) (2,3)*
35 - 49	3.74	3.38	4.01	3.26	27.29	0.0000	All
All ages	3.00	3.17	4.04	3.11	57.81	0.0000	All

\* 1 stands for poor, 2 represents moderate and 3 stands for sufficient.

Source: Author's calculations based on Fertility and Family Welfare Survey data, DTRC, AAU.

A closer look into the data on ideal family size in conjunction with reported achieved fertility levels shown in Table 4 is more instructive to examine the links between these two important indicators of current and future trends of fertility. For instance, if we compare desired number of children for women in the age group 20-34 with mean parity that these women had by the same age from Table 4 by level of self-declared welfare status, we may observe that women in the poor category have already exceeded their ideal number by 1.06 children and those in the moderate group by 0.61 child, while women in the sufficient group still need an additional 0.83 child to reach to their family size goals. This can be interpreted in several ways. One possibility is that fertility among the poor and the moderate groups is probably a matter of chance than choice,

which as we shall demonstrate below is the case. On the other hand, as we have mentioned earlier, since the target of reproductive strategy is surviving children the excess of expressed fertility may be seen as an insurance strategy against future possible deaths. The latter, however, is less likely to be the case and may be proved indirectly from the data on demand for additional children shown in Table 5.b, which shows lesser demand for additional children among poor women than women in the sufficient group.

Table 5b: Demand for Additional Children by Welfare Group (percentages)

Responses by age of women	Self-declared welfare group			All
	Poor	Moderate	Sufficient	Dire Dawa
Yes	19.7	28.8	37.6	23.2
No	55.8	40.6	23.4	49.2
Up to God	24.7	30.6	39.0	27.1
$\chi^2 = 211.311^* \text{ d.f.} = 4$				
35 - 49				
Yes	6.3	7.1	11.5	6.8
No	57.6	18.3	4.0	80.0
Up to God	11.2	17.4	19.5	13.2
$\chi^2 = 59.83^* \text{ d.f.} = 4$				
All Ages				
Yes	10.7	15.7	21.8	12.8
No	74.7	62.5	55.6	70.2
Up to God	14.6	21.8	22.6	17.0
$\chi^2 = 151.1^* \text{ d.f.} = 4$				

The hypothesis of no correlates between demand for children and welfare is rejected by the chi-square test at the one percent level.

As can be noted from the table, the percentage of younger women (aged below 35 years) demanding no additional child increases from about less than a quarter among women who consider their income as adequate to 41 percent among those in moderate groups and more than 55 percent among women in poor households. A similar pattern of relationship also exist for the older cohort (35 through 49 years). The percentage of women demanding no more children

increases from less than 5 percent in the sufficient group to almost one in five in the moderate category and about one-third among women in poor households. The above observation also suggests that given the tendency that fewer younger women are generally demanding additional children than the women in the older cohort, *ceteris paribus*, there is a greater potential for future fertility decline in the area.

### **Knowledge, Attitude and Practice of Family Planning**

We have earlier argued that part of the explanation for the deviation between achieved and desired family size lies on differences in the level of choice in reproductive strategy. Knowledge and attitude about family planning and use of contraceptives are, hence, its practical expressions.

As may be learned from Table 6.a, attitude towards family planning was generally more favourable among women who consider their income as sufficient followed by those in the moderate category. Women in poor households had relatively less favourable attitude towards family planning. Looking at the data given for all ages, the percentage of women who approve family planning increases from about 70 percent for women in poor households to close to 80 percent for women in the sufficient category. Using the chi-square test, these differences in attitude were found to be statistically significant at less than one percent level.

In fact, the differences in attitude concerning family planning that exist between the different self-declared welfare groups become much wider when age differences are considered. For instance, among the younger cohort only less than 2 percent of the women in the 'sufficient' category disapprove family planning compared to a little higher than 15 percent among the poor women. It is likely that part of the differences in attitude are outcomes of differences in knowledge about family planning and are likely to create differences in the use of family planning methods, which, at the same time, might be the underlying reasons for the differences in fertility levels observed in the earlier sections.

There were also statistically significant differences in knowledge about family planning methods between different welfare groups as confirmed by Table 6.b. Knowledge was generally high among women who consider their income as sufficient followed by those in the moderate category. Women in poor households had relatively low knowledge about family planning.

Looking at the data reported for all ages, the percentage of women who know any family planning methods declines from about 74 percent for those in the 'sufficient' category to less than 60 percent for the poor category. As shown by the chi-square test, the observed differences in knowledge were statistically significant at less than one percent level.

Table 6a: Attitude Towards Family Planning by Age of Mothers and Welfare Group, Dire Dawa, 1994 (percentages)

Age of mother	Self-declared welfare group			All Dire Dawa
	Poor	Moderate	Sufficient	
20 - 34				
Approve	84.3	85.8	98.3	85.4
Disapprove	15.7	14.2	1.7	14.6
$\chi^2 = 22.19^* \text{ d.f.} = 2$				
35 - 49				
Approve	64.2	69.5	72.1	65.9
Disapprove	35.8	30.5	27.9	34.1
$\chi^2 = 19.66^* \text{ d.f.} = 2$				
All Ages				
Approve		70.5	79.9	72.2
Disapprove	29.5	24.8	20.1	27.8
$\chi^2 = 21.45^* \text{ d.f.} = 2$				

Although knowledge and attitude about family planning show how much people are ready to exercise reproductive-related choices, the ultimate determinant is the practice or use of effective fertility control devices. Consistent with the observation of high fertility, relatively low knowledge and less favourable attitude towards family planning, the poor continue to be the least users of modern family planning with a contraceptive prevalence rate of less than 5 percent. In contrast, the prevalence rate among those women in the adequate category is observed to be twice of those in the poor category and 40 percent higher than those in the moderate group.

**Table 6b: Knowledge of any family planning method by age of women, current use of modern family planning methods and self-declared welfare group, Dire Dawa, 1994 (percentages)**

	Self-declared welfare group			All Dire Dawa
	Poor	Moderate	Sufficient	
20 - 34 (Knows any family planning method?)				
Yes	78.4	75.3	91.5	78.2
No	21.6	24.8	8.5	21.8
$\chi^2 = 19.04^* \text{ d.f.} = 2$				
35 - 49 (Knows any family planning method?)				
Yes	49.2	60.4	66.5	52.9
No	50.8	39.6	33.5	47.1
$\chi^2 = 81.89^* \text{ d.f.} = 2$				
All Ages (Knows any family planning method?)				
Yes	58.3	65.6	73.9	61
No	41.7	34.4	26.1	39
$\chi^2 = 91.5^* \text{ d.f.} = 2$				
Currently using modern FP	4.6	7.2	12	5.8

## Mortality

The relationship between mortality and poverty or generally standard of living is perhaps one of the most extensively researched areas. In the present study, four different, but related, indicators of mortality were calculated from survivorship data on children ever-born by age of mother in order to investigate the links between mortality and self-declared welfare status. These were infant mortality, mortality between exact age 1 and 5 years, under five mortality and expectation of life at birth (see Table 7).

Irrespective of the measurement used, as expected, death rates were consistently higher among the poor and lower among the well-off. The average expectation of life of a newly born baby in a poor household was at least 10 years shorter than his/her counterpart born in households which

regarded their income as sufficient. Similarly, with respect to infant mortality, out of 1000 infants born in poor households 91 of them die before their first birthday and this is in contrast to only 41 per 1000 among infants born to households with sufficient income. This represents a 270 percent higher risk of death among infants of poor households compared to babies born into households with sufficient income.

Table 7: Mortality and Standard of Living

Mortality indicators	Self-declared welfare group			All Dire Dawa	Significant pairs at 5% level (Z-Test)
	Poor	Moderate	Sufficient		
Infant Mortality Rate					
Male	95.4	85.0	42.2	90.4	(1,3) (2,3)*
Female	86.2	56.3	39.8	79.8	All
Both Sexes	90.9	70.7	41.0	85.2	All
Child Mortality					
Male	31.0	21.8	9.8	28.4	All
Female	26.0	14.6	5.6	19.0	All
Both Sexes	28.5	18.3	7.7	23.8	All
Under Five Mortality					
Male	123.4	107.7	51.6	116.2	All
Female	110.0	70.1	45.2	97.3	All
Both Sexes	116.8	87.7	48.4	107.0	All
Expectation of Life at Birth					
Male	58.8	60.4	68.4	59.5	(1,3) (2,3)*
Female	60.2	66.1	70.9	62.4	All
Both Sexes	59.5	63.2	69.6	60.9	All

\* 1 stands for poor, 2 represents moderate and 3 stands for sufficient.

Source: Author's calculations based on Fertility and Family Welfare Survey Data, DTRC, AAU.

There were also significant differences in mortality experience between the poor and moderate and between the moderate and the sufficient. But interestingly, for most mortality measures the difference between the poor and the moderate was statistically significant only for females and

not for males.

A number of possible explanations can be given why mortality should be higher among the poor and lower among those with sufficient income. Higher income guarantees a household to provide children with sufficient amount of food. It also provides a means to pay for preventive services including for the physician, hospitalisation, drugs and maternity care during child birth. Moreover, since both size and quality of housing are likely to be correlated with household income those with higher income enjoy better facilities and hence are able to reduce the chance of exposure of their children to infectious agents.

Generally, it is believed that those households with better economic status have the opportunity to provide more health enhancing goods and services that affect child health and survival through increased per capita calories and nutrients, clothing and shelter, sanitary facilities, use of medical facilities and adult supervision than the lower-income households.

## 6. SUMMARY AND CONCLUSION

Interrelationships between population and poverty can be studied at different levels and from several perspectives. Perhaps the most common approach is macro-level analysis, which looks into the pressure of growing population on resources such as social services, investment and natural resources. However, many of the interactions between population and poverty originate, or are felt most strongly at the micro-level; that is, at the level where fertility-related decisions are made, and where the effects of poverty on mortality are observed. The present study, making use of cross-sectional data from Dire Dawa collected in 1994, made an attempt to examine the micro-level relationships between selected demographic variables and standard of living, with emphasis on the poor households.

The findings of the study are that poor households tend to experience early marriage, have large family size, high dependency of children and high fertility. But interestingly, compared to others, poor households wished to have fewer children (and most of them also need no more additional children) which was interpreted in the study as a behavioural response to the increasing costs of children. However, the study also found out most of these women had limited knowledge of

family planning methods, and even those who know about it had rarely practised it. In relation to mortality, as may be expected, death rates were consistently higher among the poor and lower among the well-off. For instance, infant mortality risk was observed to be 270 percent higher among infants of poor households compared to babies born into households with sufficient income.

The implications of the findings are that concerned bodies should attempt to provide the poor with facilities that enable them to exercise their choice, particularly in the area of fertility regulation. Adequate IEC programmes and expanded family planning services could be useful in this direction. Provision of expanded primary health-care facilities that are known to significantly reduce infant mortality rates could also help to bring down health-related disparities between the haves and the have-nots.

#### Notes

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