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GENDER AND ECONOMIC ADJUSTMENT IN GHANA

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1. INTRODUCTION

The body of literature documenting the 'inevitable' feminisation of poverty resulting from the pursuit of 'development' objectives is vast. Likewise, a great many treatments of the economic adjustment process are devoid of explicit gender references. The coming together of these various strands of thought, represented at the extremes by the above examples, has been hindered by a lack of the comprehensive data so essential to informed debate. For example, Jolly (1986) states:

"as with many of the most important human dimensions of recession and adjustment, hard evidence on the vital question of how women and children have been affected is limited".

This paper uses Living Standards data to consider the case for and against regarding **gender** as an important social dimension of economic adjustment in Ghana. A framework is proposed for testing the hypothesis that gender is an important disaggregation for the analysis of an individual's ability to respond to a process of change such as economic adjustment, with the Ghana Living Standards Survey data (1987-88) being used to examine the validity of the hypothesis. *debate*

The paper is organised as follows: section 2 presents and justifies the framework used for analysing the interactions between economic adjustment and individuals, section 3 briefly describes Ghana's economic adjustment, section 4 reviews some of the literature on the role of women in Ghana and sub-Saharan Africa, section 5 describes the data and examines the empirical evidence for a gender-differentiated analysis. Throughout this section suggestions are made regarding a series of in-depth micro-analyses which should be further pursued, and in addition, the general suitability of the GLSS data for the gender

analysis is assessed. Finally, section 6 presents and discusses the conclusions of the preceding empirical analysis and draws out some policy implications.

2. METHODOLOGY

This section discusses some of the methodological problems faced by a 'macro-micro impact' study such as this, and provides a rationale for the analytical approach adopted here.

2.1 Methodological Problems

2 for other yrs
The absence of comparable data as comprehensive as the 1987-88 Ghana Living Standards Survey (GLSS)^x essentially leaves us with one data point with which to analyse a process of change. Secondary data is available, and will be presented in subsequent sections, but it is often fragmentary in nature and of questionable accuracy. However, even if we had two comparable data points, a simple before-and-after approach to the analysis of the impact of economic adjustment on a population subgroup is difficult for a number of reasons:

- (1) we have no knowledge of the counterfactual situation, i.e. what would have happened in the absence of the particular adjustment programme adopted (or any other type of programme).
- (2) we do not know to what extent changes in macro-economic indicators are caused by the economic adjustment as opposed to contemporaneous external forces.
- (3) we are unable to gauge the extent to which changes in macro-economic indicators are caused by the economic crisis that precipitated the adjustment process in the first place.

(4) how do we separate the effects on macro-economic indicators brought about by the policies *per se*, from the effects brought about by the subsequent, and massive influx of foreign resource flows?

Studies attempting the above before-and-after exercise in inductive reasoning include those associated with UNICEF (Jolly and Cornia 1984, and Jolly 1985) which have relied on secondary data trends from a number of countries undergoing recession and/or adjustment to evaluate nutrition and health impacts. The authors' interpretation of these trends has been the subject of much controversy, with the authors stating that "the present crisis ... has severely aggravated the situation of several social groups" and that "child welfare indicators ... are unambiguous in pointing to a deterioration in child status" (from Behrman 1988). However, these conclusions are not shared by others, Behrman (1988), for instance, states that this "set of studies that seem to lead to the conclusion of little, or at least unproven, systematic impact of recession and economic adjustment on health and nutrition, is summarised as finding that adjustment policy usually multiplies negative recessionary impact on the poor and vulnerable".

A similar vision of a benign counterfactual situation is demonstrated by UNICEF's Regional Programme for Women in Development, Americas and Caribbean Office (1987). In her foreword the Regional Director states "the restrictions imposed by the foreign debt and the adjustment policies introduced have plunged the most vulnerable social groups, and women and children in particular, into a dramatic situation". Until techniques and theory are developed to a level that permits the accurate measurement of a wide range of 'outcomes' and their

attribution to specific policies, these types of statements are doomed to be equivocal.

On a much more micro level, Moser's 1989 before-and-after study identifies the most important potential changes wrought by adjustment on individuals in an Ecuadoran village (lowering of household incomes, changes in food consumption patterns, and changes in public expenditure) and maps them onto the ability of individuals to cope, differentiated by gender. She compares data from 1978 and 1988 on women's time allocation and occupational activity, and household composition. The emphasis on the coping abilities of women seems to crowd out any explicit discussion of women's ability to seize any opportunities created by the relative price changes associated with adjustment.

Collier and Horsnall (1989) examine how 'the inter-sectoral immobility of women can structurally impede structural adjustment'. The authors improve the quality of the debate by standing the usual analysis on its head: instead of looking at how adjustment affects women, they look at how women can propel or inhibit the rate and pattern of adjustment. To some extent this analysis short-circuits the need for imperfect before and after comparisons.

2.2 Proposed Methodological Framework

An ideal approach would require the ability to trace and measure the effects of specific adjustment policies (often non-simultaneously implemented) and their interactions upon different social groups and vice versa. While this first-best approach is operationally very difficult, the second best solution is not to go ahead and attempt it

anyway; we have already seen the equivocal nature of the conclusions that can be drawn from this approach.

We argue that the preferred approach is to portray economic adjustment as a process that generates burdens and creates opportunities, in a way that any process of change must. The dimensions along which the ability of individuals to *cope* with burdens and to *seize* opportunities are most widely divergent are the dimensions of greatest policy interest. The vast *women in development* literature would argue that *gender* is one of the most important and policy-useful of these dimensions, and it is against this background that this paper pursues its analysis.

The analytical framework employed is presented in Figure 2.1. Economic adjustment typically involves a variety of macroeconomic policies with the dual objectives of reducing both an internal fiscal account deficit and an external balance of payments deficit. Reduced expenditures by both the government and the private sector reduce the demand for tradeables and non-tradeables alike, while an exchange rate devaluation switches the pattern of demand to non-tradeables, and the pattern of output towards tradeables. Internal demand for non-tradeables is maintained, while resources are mobilised into the production of goods that will maximise profit.

Reduced Government expenditure on health, education, infrastructure and welfare programmes will result in burdens that are higher, and less easily borne by some individuals than others. Expenditure switching will also create burdens, but opportunities too. Those who can most quickly re-mobilise their own labour and obtain access to other productive resources will be better able to thrive in the adjustment

The analytical framework adopted in this paper will be to review the links in figure 2.1 in the Ghanaian context, and then to examine current outcomes, occupations, roles, and constraints (in parentheses and italicised in Figure 2.1) by gender, age, relationship to household head, characteristics of household head, and other household characteristics. We shall not reveal our preferences and undertake a detailed econometric analysis of one or two issues, but rather cut across as many types of data as possible in order to establish a baseline from which to view the forthcoming 1988-89 data. However, throughout the empirical results section we do identify some further detailed analyses that we think would prove the most fruitful.

3. GHANA'S ECONOMIC ADJUSTMENT

3.1 Background

As Roe (1989) notes, the case of Ghana's economic adjustment is far from standard. Unlike many countries 'belatedly grappling' with resource reallocation in accordance with a new set of relative prices that are largely the result of some exogenous economic forces (oil price rises, declining terms of trade etc.), Ghana's economic decline can be traced back to the early 1960's. Roe states:

"Ghana differs from certain other African countries where it is arguably the case that the structural adjustment policies of the 1980's, in setting right unsuitable macro imbalances and chronic resource misallocations, may have also generated negative side effects harmful to the incomes and welfare of vulnerable groups. In Ghana, structural adjustment was more to do with putting a floor under the process of long-term decline: a process which was unequivocally damaging to many economic interests".

A counterfactual scenario of continuing economic decline in the absence of adjustment is implied by Roe's analysis, and he speculates that 'the future of almost all groups in the economy must look just a little brighter' as a result of the economic adjustment programmes. Norton (1988), and Tabatabai (1986) concur with Roe's 'floor installation' argument in that conditions were so poor during the pre-adjustment period, that apart from the retrenched urban workers, it is difficult to identify, *a priori*, any particular group that has suffered heavily as a consequence of adjustment policies.

Other writers extend this line of reasoning in suggesting that severe market distortions, as prevailed pre-adjustment, restrict women's

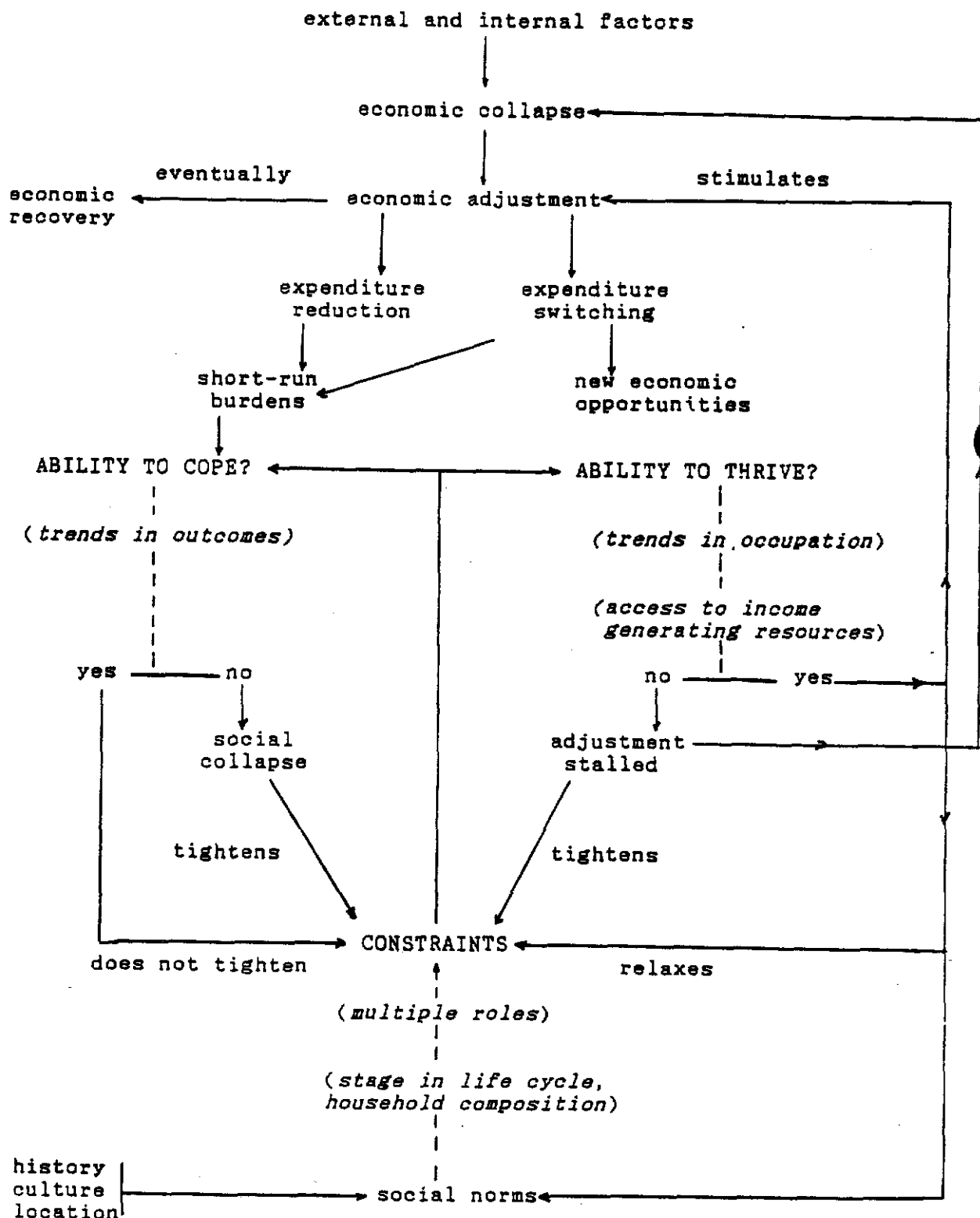
climate. Some individuals will be less affected by the adjustment (subsistence farmers for instance), while others will be greatly affected by the changes (those most heavily dependent on markets).

Individuals face many constraints in their ability to respond to adjustment. Other than the standard budget constraint, time, health status (strength and stamina), educational attainment, land rights, credit access, agricultural extension information, and communications all serve to shape response elasticities in a fairly tangible way. In addition, a wide set of social norms delineate rights, activities, responsibilities, hierarchies and roles, often by age, gender, birth order, and household demographics. These factors are intangible only in the sense that some are quite difficult to measure, but they exercise a profound influence over the division of activities witnessed in any society. Almost by definition, norms have been distilled down over many years, and are often regional/tribal/religious in origin.

The extent to which these constraints are binding will determine the ability of individuals to respond to economic adjustment. If individuals cannot respond to 'correct prices' then adjustment will stall¹, and might ultimately fail. Likewise, if individuals cannot cope with the short-term burdens, adjustment is self-defeating. The ability of individuals to respond has direct feedback effects on constraints, and indirect effects via role-modelling and family demographics - thus we try to avoid what Elson (1988) calls "the male bias in trying to conceptualise the impact on women without considering how this impact is mediated by gender relations".

1 this is what the latest Commonwealth Secretarial publication on this subject is referring to in its title '**Engendering** adjustment for the 1990s'

Figure 2.1 Economic Adjustment and Individual Living Standards



participation in the development process by limiting the development process itself (Lele 1985). Gladwin and McMillan (1989) concur, arguing that 'when macro prices are straightened out to reflect actual supply and demand conditions and provide incentives to all producers, women producers may benefit from them more than men producers, who have some hope of being included in the group of political elites' and furthermore, 'adjusting macro prices.... are thus gender-neutral incentives to produce'. In short, if rent-seeking behaviour is so widespread and male-dominated, then its removal may well benefit women. Safilios-Rothschild (1985) relates this line of reasoning to the general male-bias in development projects and states, that in sub Saharan Africa, such interventions often:

"make it necessary for women to work more intensively than before to raise their husbands' cash crops and diminish their ability to earn an independent income from agricultural surplus".

The arguments, that reform will reduce an entrenched male bias, are appealing in their simplicity, but it must be remembered that (i) 'women' are a highly heterogeneous group of economic agents and must not be treated as an 'isolatable' group (Elson 1988), and (ii) other components of adjustment, such as the reduction of public services that has taken place in Ghana, may simply shift costs (provision of these services) from the public sector into the household domain.

3.2 Ghana's Adjustment Programmes²

The first phase of the adjustment sequence was represented by the first Economic Recovery Programme (ERP I) of stabilisation in 1984-86. The

² this sub-section draws heavily on Roe (1989).

second phase, ERP II, was initiated in 1987 and focusses more on structural adjustment and development. Broadly speaking, the IMF's main area of policy involvement has been in exchange rates, credit, debt management, and public finance, while the World Bank has been more concerned with productive and managerial rehabilitation, although as Roe notes, there has been close collaboration among these two institutions and the Ghanaian government in policy design.

More specifically, policies include:

(1) exchange rate and trade policy

In early 1983 the nominal exchange rate stood at 2.75 cedis to the U.S. dollar, and by 1988 this had depreciated to around 230 to the dollar. Quantitative restrictions on imports have gradually been dismantled, and foreign exchange controls are now minimal.

(2) fiscal policy

Revenues: it is hoped that the collection of direct taxes will be enhanced via the reform of exemptions and brackets, generally seeking to make the system less progressive, a measure seen as essential to reduce the benefits of tax avoidance. Indirect tax measures include a broadened sales tax, and a wide range of ad-hoc excise duties on mass consumption items.

Expenditures: by 1988, public employee retrenchment had resulted in approximately 19,000 civil service redundancies, and 12,000 wage entries removed from the Cocoa Marketing Board. Wage scale differentials within the civil service have not widened, providing, as

Roe sees it, little incentive for a reversal of the public-to-private sector flow of talent. In fact, recent analysis of a data set from Cote d'Ivoire, comparable to the GLSS, has demonstrated that faced with a binding public sector wage bill constraint, public sector efficiency can best be promoted via employment reduction rather than wage reduction (van der Gaag et.al. 1989).

(3) Subsidies and Cost Recovery

Consumer prices: by 1985 only 8 items were subject to Government price control, and petroleum based product prices were being quickly adjusted in response to exchange rate devaluations.

Input prices: fertiliser and pesticide price subsidies have been reduced, with the full elimination of the fertiliser subsidy slated for the end of 1989. This is one area in which the GLSS data will help determine the distributional consequences of such a policy.

Cost Recovery: user charges for health and education have been raised, but Roe argues that the consequent distributional effects are not unequivocally regressive. Improved service delivery and quality for an explicit user cost has to be weighed against delays and rent-seeking in delivery and staff demoralisation in quality.

(4) Cocoa Prices and Marketing

Roe summarises the cocoa price policy with: 'incentives (to grow cocoa) appear for the moment to be on a much sounder footing'. Rises in the domestic price of cocoa, together with a decline in the world price will likely result in a lower level of smuggling activity. Cocobod, the Cocoa marketing board, has been streamlined in its staffing numbers, assets, and functions in the hope that it will provide a more efficient

set of services to farmers that cannot easily be provided by the private sector.

(5) State economic enterprises

Of the approximately 230 state enterprises (which accounted for 16% of total government transfers in 1983), 30 have been identified for divestiture to private ownership in an attempt to improve their efficiency and management.

(6) Social and infrastructural issues

The interaction of the welfare of the poor and the overall success of adjustment has been recognised, and efforts have been made to minimise costs imposed on the most vulnerable. Donors have responded to, and been the originators of initiatives to rehabilitate the provision of basic needs. Under the ERP II, provision was made for a package of these measures, under the umbrella of PAMSCAD (Programme to Mitigate the Social Costs of Adjustment).

The above collection of programmes has now been operational for several years. Attempts have been made by various authors to identify groups for which the adjustment programmes have created opportunities for, and placed burdens upon. As a general statement, Norton (1988), from his pre-GLSS review of the evidence, concludes that "the Economic Recovery Programme has been neither a miracle cure for the economy or an unmitigated disaster for poor and vulnerable groups". He suggests a focus on relative gains and losses experienced by different groups.

Prominent among those who may reasonably expect to experience relative gains are producers of traded goods. Price incentives in cocoa,

mining, and timber have improved supply responses (net of black market activity), but as Roe (1989) notes, most of the 'easy' gains have probably been made (i.e. those involved in re-utilising excess capacity), and the next round of sustained output and productivity improvements will require substantial new investment. Retained public sector workers are also likely to be relative gainers as a result of more incentives-based organisational arrangements. As for the retrenched urban workers (fifteen percent of public sector workers have been, or will shortly be, laid off [Roe 1989]), the ease with which they can find alternative employment, determined in part by where they seek it (ie urban employment will probably be harder to secure than rural employment), will define the magnitude of their burden. For market traders, mostly women, it is difficult to predict, *a priori*, their relative net gains or losses. On the one hand, the upturn in overall economic activity should work to their benefit, but if (i) their traded goods rely on expensive imported inputs for their production or (ii) there is a flood of new traders displaced from other activities, profits margins could be considerably diminished. In food agriculture, if food prices incentives are effective, one would expect at least the larger farmers to raise output, but again, profit margins will obviously depend critically on the import content of improved inputs and demand elasticities for food, especially in the urban areas.

4. ROLE OF WOMEN IN GHANA

It is the differential role of women *vis a vis* men that adds a gender dimension to an analysis of the effects of economic adjustment on individuals. If men and women had similar responsibilities inside and outside the household, were subject to the same constraints, and demonstrated similar current living standards, then gender would be a less fruitful dimension along which to pursue a distributional analysis than, for example, occupation, age, geographic location, or initial wealth endowment.

However, a considerable literature on women's roles in developing countries would argue against this gender indifference. In this regard, Boserup's (1970) work is often cited as the first 'collectivisation' of a number of references regarding the role of women in economic development.

In Ghana, according to Aidoo (1983), "the position of a woman ... is no less ridiculous than anywhere else. The few details that differ are interesting only in terms of local colour and family needs." Yet, from the same article we learn of a famous Ghanaian saying "if you educate a man, you educate an individual. If you educate a woman, you educate the nation". Generating the polemic is the commonly encountered male attitude towards women (by no means limited to African societies): that of a role privately acknowledged as a cornerstone, but publicly underemphasised.

4.1 Social Norms

Collier and Horsnall (1989) emphasise that social norms or conventions limit the inter-sectoral mobility of women, and place women in sectors in which mobility is relatively more important for adjustment. These norms include: male dominated access to information (contributing to the male-domination of cash-crops), unequal patterns of reciprocal obligations (i.e. women have much heavier time burdens), poorer access to private savings and credit sources, and barriers to formal sector employment experienced by women (which they analyses in much detail for Cote D'Ivoire).

From a more anthropological viewpoint, Bryson (1980) looks at social structures (or 'imperatives'), that support the division of labour in agriculture in sub-Saharan Africa. These include family arrangements (polygyny, early age of marriage for women, and early age of first childbirth), inheritance (land) systems (matrilineal and patrilineal), bridewealth payment (opposite of dowry), and the close association in sub-Saharan Africa between the giving of food and its production. Bryson claims that the strength of these institutions has been generally maintained, even among some urban elites.³

³ although Oppong's work with Ghanaian urban elites reminds us that these roles are susceptible to outside influences. Her 1983 study of married male primary school teachers in Accra found that the highest proportion of self-reported joint-household making took place within households where the wife's income contribution relative to the husbands's was highest.

With specific reference to Ghana, Bleek's (1976) case study of a Kwahu village approximately 100 miles north of Accra, offers some insights into female roles within marriage in a matrilineal society:

"the male partner receives status and prestige from the woman and gives her power in return. The power in her hands only works if she pretends that she does not have it....Although the woman is the central figure in the conjugal family, official authority lies with the man, who is, however, frequently manoeuvred by his wife".

But to present these norms without linking them to their functional manifestations is not relevant to our analysis, therefore the next section extends the discussion of social norms, but in the context of functional consequences.

4.2 Multiple Roles

While the literature is fairly unanimous in declaring that women in developing countries (both adults and children), and particularly in Sub Saharan Africa, have a wider variety of roles and responsibilities than men, there is still tremendous debate as to how *binding* the time constraint is overall, and what determines the scope for substitution among activities. This section will discuss various female roles and classifications proposed by various writers, while section 4.3 examines their relationship to constraints.

Oppong and Abu (1987) argue for a six-role definition of Ghanaian women:- workers, wives, mothers, housekeepers, kin-members, and community activists, and Aidoo (1983) includes many of the same activities in her list. Perhaps a more useful definition involves **functions** rather than **roles**, although we are not discounting the

importance of role-playing. Indeed we note that Lele (1985), Collier and Horsnall (1989), Greenstreet (1971), Dugbaza (1981-82), all stress the importance of the female role model-demonstration effect both within and across generations.

4.2.1 Production Outside the Home

In general, the invisibility of women's economic contribution outside the home as measured by censuses and ILO statistics, is smaller for Ghana than for many northern African states. For example, in a number of countries, Dixon (1982) compares ILO, FAO, and agricultural census estimates of the percentage of the agricultural labour force that is female, and for Ghana the figures were respectively 39%, 48%, and 42% for 1970. Nevertheless, the cloaking of secondary and tertiary female economic activities by the formal censuses is a real problem.

• trading

In West Africa, women are known as 'traders par excellence' (Lele 1985) and in Ghana, the 1970 census suggests that 26.1 % of Ghanaian women were primarily involved in 'commerce' activities. However, Boserup's (1970) citing of a Ghanaian town-level study, which shows that 70-80% of adult women engage in trading activities, demonstrates the importance of non-primary job classification in Ghana. The importance of trading is thought to be greatest in the northern regions of Ghana (Norton) and the urban markets (UN 1984). Trading income has been identified as an extremely important to the welfare of the household, and especially to the nutritional status of children (Tripp 1981) via the higher marginal propensity of women to spend on health inputs *vis a vis* men.

• **agriculture**

According to the 1960, 1970, and 1984 censuses for Ghana, just over a half of all employed adult women were primarily involved in agriculture, with the female share of all individuals involved in agriculture standing at 36.6% in 1960, 43.2% in 1970, and 51% in 1984. The perceived importance of African women in food production (food processing, marketing, and preparation are almost taken for granted to be exclusively in the female domain) has received much attention in recent years. Koopman-Henn (1983), Spring (1988), and Gladwin and McMillan (1989) all emphasise the crucial role of women in raising sub-Saharan food production.⁴ Gladwin and McMillan conclude that "a [short-run] turnaround [in African food production] is not possible without helping women farmers ...due to the active participation of so many women in farming".

While the sexual division of labour in agricultural tasks is sharp (see Ardayfio 1986) for example), we are reminded by several writers that this division is not fixed in either a temporal or a spatial sense (Bukh 1980). For example, in West Africa, and in Ghana specifically, Palmer (1988) identifies several examples of women with a large stake in the production of cash crops.

4 Svedberg (1988a) explicitly argues that women have an absolute biological advantage over men in sub-Saharan agriculture, and that this is acknowledged in part by the husband, through the payment of a brideprice.

• **formal sector employment**

The scant evidence that exists, reports low representation of females in the Ghanaian formal sector. Greenstreet (1971) presents some 1967 Ghanaian Labour department statistics which give women a 10% share of Ghanaian formal sector employment. Section 5.3 provides some much-needed GLSS breakdowns by occupational sector.

4.2.2 Production Inside the Home

The distinction between goods produced outside and inside the home reflects convenience rather than reality, in that both are arguments in the utility function (Gronau 1980). Singh and Morey (1987) attempt to estimate the dollar value of work-at-home⁵ for an area of rural Burkina Faso⁶. Although the authors' point estimates exhibit wide variation, all emphasise the percentage importance of the value of the wife's work at home relative to measured family farm income (from 25% to 118% depending on the number of other wives and the number of female children).

• **child quality and quantity**

According to Oppong and Abu (1987), social and cultural pressures persist in Ghana for child-bearing to continue throughout the reproductive span. Sixty percent of women in the Ghana Fertility Survey of 1983 expressed a desire for five or more children, while only six

5 which Gronau terms 'the forgotten industry'.

6 their definition of work-at-home is quite broad, including child care, product transformation, cooking, cleaning, maintenance work at home, and fetching fuel and water. Own-account agricultural activities are not included.

percent wanted three or less. Child care and maintenance is likely to be exclusively in the woman's domain and several studies have shown a strong association between child nutritional status and both child care time and female income streams, with the increased income/decreased childcare tradeoffs having inconclusive net effects on child health.

Bouis and Haddad (1989a) demonstrate for a rural Philippine sample, that a combination of increased maternal leisure time, better maternal nutrition during pregnancy, and increased child care time for children under one year old, gets preschoolers off to a better 'head-start'. However, preschooler nutritional status quickly falls to become comparable to those preschoolers that were unable to have such a 'head start' when their mothers begin to enter the labour force without a requisite improvement in other nutritional inputs. Thus the extra income streams associated with the mother do not seem to be specifically earmarked for children, having become diffused in an essentially income-pooling situation. Of course this result may not hold for West Africa where there is less separation between earner and spender.

• *household activities-product transformation*

The two Ghanaian groups most involved in promoting women as 'part of the solution and not the problem' are the National Council on Women and Development and the December 31st Women's Group. Both groups have invested their resources heavily in small-scale food and non-food processing projects for women in rural areas. These initiatives seek to build on the existing female entrepreneurial spirit, but reorientate the focus away from distribution to production. Ghanaian women have long had a non-agricultural income-generating role. These activities include fish smoking, charcoal manufacture, garri (from cassava)

processing, brewing pito (a traditional drink), and soap manufacturing as well mud and thatch hauling for house construction (UNCHS 1985).

- **fuel and water collection**

Fuel is an important raw material input for most off-farm income-generating activities, and its collection (as for water) for general household use is almost exclusively the domain of the woman and her children. Women in northern Ghana have heavier burdens in this regard compared to women in the south where these resources are less scarce (Norton 1988). The fuelwood resource situation in particular has very important consequences for women's time allocation decisions. Ardayfio (1989) reports that population pressure, drought, desertification, and no new planting has reduced Ghanaian forest areas by 75% in recent decades.

4.3 Constraints and the Ability to Respond

The ability of the individual to respond to positive and negative consequences of economic adjustment will be conditioned by the demands on their time, their current living standards, and their ability to gain access to resources. If these differ significantly and systematically by gender, then there is an important gender dimension to economic development and economic adjustment in Ghana.

4.3.1 The Time Constraint

To get some idea about the ability of women to participate in indirect, non-targeted initiatives/opportunities, it is somewhat instructive to examine their ability to participate in programmes and projects specifically targeted towards them. McGuire and Popkin (1988) pose the question:

"what if we launched a programme and our key target group was so overworked, so overcommitted with time demands, and so poor that the intended beneficiaries could not participate without sacrificing some other essential functions?"

They then proceed to describe women as involved in a *zero-sum game* in which 'time or energy devoted to any new effort must be diverted from their other activities'.

With regard to empirical evidence, Kumar and Hotchkiss' 1988 study of Nepalese hill districts implies that women can often become involved in a *negative-sum game*. They found that because of low agricultural productivity, new land needed to be cleared to maintain household basic needs, but that the subsequent deforestation increased the time allocated by women to collect fuel, which meant less time for female agricultural labour input, which lead to less calories from this income source, which in turn increased the need for deforestation and so on in a downwards spiral.

Kennedy's 1989 study of women in the south Nyanza district of rural Kenya provides an illuminating demonstration of a binding *energy*, rather than a *time constraint*. Increases in household income (in both female and male-headed households) due to agricultural commercialisation (a plank in most economic adjustment programmes) raises female calorie intake, but does not improve female nutritional status (anthropometric measures) or female health status. Female body mass index actually declines with a rise in calorie intakes, with Kennedy concluding that the energy intensity of female activities is increasing. The energy constraint is deemed more important by these women than their current nutritional status.

In a similar vein, but in a West African setting, Barrett and Browne (1989) report on some of the Intermediate Technology Group's work on labour-saving devices in rural Gambia. The labour saving is geared at laborious time-consuming domestic duties such as food and fuel processing; specifically, a sorghum mill is being evaluated. The interesting conclusion of their evaluation was again, that energy rather than time was being conserved by the mill users.

For Ghanaian women, the sense that often there is no time slack in their day is conveyed by Ardayfio's description (in Dankelman and Davidson 1987) of 2 unexceptional days in the life of a northern Savannah woman. Day 1 consists of walking 2-3 miles to cut wood, headloading it home, converting it to charcoal for sale, and cooking the evening meal. Day 2 consists of walking 3 miles to the nearest market to sell charcoal, buying groceries for the daily meal, returning home, and starting the trek to the Savannah woodlands all over again.

Finally, evidence on the trade-off between women's work and time spent in childcare (in terms of child nutritional status), is less clearly represented by a zero-sum game. First, extra maternal employment may well be compatible with childcare, second, adequate maternal childcare substitutes may be found in kin groups and older children, and third, the income effect of employment may offset any loss in childcare time. Leslie (1989) critically reviews 50 studies of women's work and child nutritional status (including that of Tripp, 1981 for a Ghanaian community) and concludes:

"overall there is little evidence of a negative effect of maternal employment on child nutritional status and therefore no justification for limiting women's labour force participation on the grounds of welfare".

4.3.2 Access to Other Productive Resources and the Regional/Cultural Dimension

In addition to the time constraint, there is considerable evidence that women in Ghana and more generally in sub-Saharan Africa are at a disadvantage when it comes to access to other productive assets, both in an acute and chronic sense.

An illustration of this is provided by the results of a rapid rural appraisal of the Dangbe district in Ghana's coastal savannah (Gordon 1986). One component of the appraisal involved discussions with groups of 15-20 individuals, to discuss, amongst other things, problems with farming and trading and how these might be overcome. Gordon reports that men had to be excluded from the discussions because "they invariably dominated the discussion, criticised women's contributions, and attributed their problems to ignorance and negligence rather than resource constraints".

Gender-based differential access to resources such as credit, land, information (education and extension), fertiliser, labour and markets is a well-documented fact throughout many developed and developing societies (Joekes et. al., 1988) and is a result of, and reinforced by the sort of male-female role-playing described in section 4.1.

For access to information, women in Ghana seem particularly disadvantaged compared to men. In terms of formal education, Spring (1988) states:

"all over Africa, the development curriculum for boys and girls is gender specific. Women are considered gardeners, instead of farmers, so women's agricultural extension curriculum includes only instruction in small-scale poultry and vegetable production rather than in major staple crops and large livestock".

Gender differentiated education begins early in a Ghanaian child's life, with Brydon (1985) commenting that 'the primary school curriculum tends to push girls in the direction of 'home science' and primary school teaching, rather than to give them more rigorous academic goals'.

• *The Regional/Cultural Dimension*

The broad regional and cultural dimensions correspond to north-south, and matrilineal-patrilineal dichotomies which are not mutually exclusive. Norton (1988) characterises the situation thus:

"in the northern pattern women take relatively little part in food farming.....their contribution...is principally in sowing and harvesting. The system of patrilineal descent offers women very few property rights...in most places women have only very minimal rights of independent access to farming land....The matrilineal kinship systems that predominate in the South allow for a much greater degree of resource holding by women, who have traditionally been able to get independent access to farming land".

This tells us that women's land access in the north is worse than that in the south, but still gives us no clue as to the male-female differences within region or lineage.

The regional dimension also illustrates the heterogeneous nature of households where an adult female is primarily/solely responsible for

maintaining the viability of the household unit and the welfare of its members. The vulnerability of female-headed households (referred to as fhoh's from now on) is thought to differ considerably in the north compared to the south of Ghana. In the north it is reported that fhoh's are a relatively modern phenomenon resulting from the British Colonial government's incentives for resource transfer from north to south Ghana (Whitehead 1987). These northern households are likely to be poor either because remittances are small or non-existent, or because women have failed to secure a relationship with able-bodied males, whereas in the south, with more matrilineal resource holding, the reasons for male absence may be more numerous, the women are more independent, and the poverty status of the female-headed households is much more variable (Norton).

These characterisations will be tested using the GLSS data. Specifically, section 5.2 attempts to use the data to identify *de facto* fhoh's (e.g. a male is the self-declared head of household but contributes little to the maintenance of the household because he is either too old or sick or absent for long periods) and examine how closely they correspond to *de jure* fhoh's.

Decision-making within the household also exhibits regional patterns. Micklewait et. al. report (in Dugbaza 1981-82) that for all activities in southern Ghana, decision-making and participation is a joint husband-wives arrangement, and for some activities, exclusively female (e.g. trading). However, in the north there are no exclusively female activities, while men are the exclusive participants and decision-makers for such activities as credit use, cash crop sales, and in the decision to use modern inputs.

4.3.3 Current Standard of Living

If an individual or household is very poor, even if the means to achieve an end are available the achievement itself may not be realised.

Even if women faced no disadvantages in access to resources relative to men, are they so poor that they cannot respond to cocoa supply incentives, cannot take advantage of a new school enrollment initiative, cannot participate in a processing initiative, cannot walk another mile to secure access to the new clean water source, cannot respond to the incentive of higher agricultural wages, or cannot reduce calorie consumption to match income reductions?

The myriad nature of the impacts of one outcome, nutrient status, on other outcomes and inputs is documented by Behrman, Deolalikar, and Wolfe (1988) and indicates the importance of initial condition ramifications upon health, educational attainment, agricultural productivity, and fertility - all factors affecting the ability to respond to adjustment's challenges.

Even when the relationships above seem weak, the argument is not necessarily weakened. For instance, Behrman and Deolalikar (1988) and Bouis and Haddad (1989b) report low estimated household income-calorie intake elasticities for relatively poor populations in several countries. Although this implies that food energy intake is fairly insensitive to the income and price changes wrought by adjustment, for several reasons this result does not contradict the basic idea of lowered living standards militating against the ability of the

individual to 'adjust to adjustment'. First, calorie intakes are only one side of the energy balance coin; even if energy intake is not much reduced by lowered incomes, energy expenditure may be (e.g. Kumar and Hotchkiss above). Second, other health inputs may be deemed by the household to be more important than food intake as incomes and prices change. Third, the pattern of food allocation may vary greatly amongst individuals within the household, and at this level of disaggregation there may be a considerable sensitivity of energy intake to adjustment effects.

On this last point, it is worth noting that Svedberg (1988b) finds no evidence of an undernutrition sex-bias in sub-Saharan agriculture as a whole, and Alderman (1989) concludes similarly for the 1987-88 Ghana Living Standards Survey data. Likewise, Deaton (1989) finds no gender bias in non-food household expenditures for neighbouring Cote d'Ivoire using Living Standards Survey Data.

5. EMPIRICAL RESULTS

The preceding section provided us with a strong indication of the kind of tables and data breakdowns that would be desirable in assessing the extent to which gender influences the ability to respond to the likely opportunities and burdens of Ghana's economic adjustment. This section uses the Ghana Living Standards Survey data to realise some of these tables.

5.1 Ghana Living Standards Survey Data

The data used in this analysis are from the Ghana Living Standards Survey (GLSS). The data were collected by the Ghana Statistical Service in 1987 and 1988, and constitute a nationally representative sample of 3136 households containing 15071 household members.

The effort devoted to all aspects of survey design, the breadth of subjects covered, and the subsequent careful data editing predispose a data set of high quality. The data cover all aspects of household income generation and expenditure; outcome measures of living standards (literacy, numeracy, housing, morbidity, anthropometrics, and reproductive histories); and constraints to further improvements in living standards (credit, savings, fuel and water collection, crude time allocation, migration, and some information about decision-making).

For a much more detailed description of the data, the reader is referred to Grootaert (1986), Pyatt (1987), and World Bank (1988).

Construction of the household income and expenditure aggregates used in

the analysis below is described in Johnson, McKay, and Round (1989a and 1989b).

5.2 Women, Poverty, and Dependency

Through a variety of poverty measures, this section seeks to establish a profile of females and female headed households: where they live, at what levels of poverty, and in what types of households.

5.2.1 Demographic Patterns

Because of the importance of regional influences, as discussed in Section 4, it is helpful to gain a clear picture straight away of the geographic location of women, and fhoh's.⁷ Table 5.1 provides the initial orientation: 51% of the sample are women, and 29.1 % of the households are self-declared female headed. Female headed hh's contain 25.2 % of the sample, indicating a smaller household size (4.2) than their male counterparts (5.1). Not surprisingly, the majority of fhoh residents are women (63.4%), and the majority of male-headed households (mhoh's) are men (53.2%). Fhoh's contain disproportionate (i.e. above 25.2%) numbers of females of all ages (but especially the elderly) and children in general.

The Forest and Coastal hinterland regions contain the highest proportions of fhoh's (43.9 % of all Upper Forest households are fhoh), with the Savannah containing the fewest (8.4%), and this is reflected

⁷ survey regions do not correspond exactly to administrative regions. Figure 5.0 relates the two sets of regional breakdowns.

FIG: 5.0 GHANA: SURVEY AND ADMINISTRATIVE REGIONS

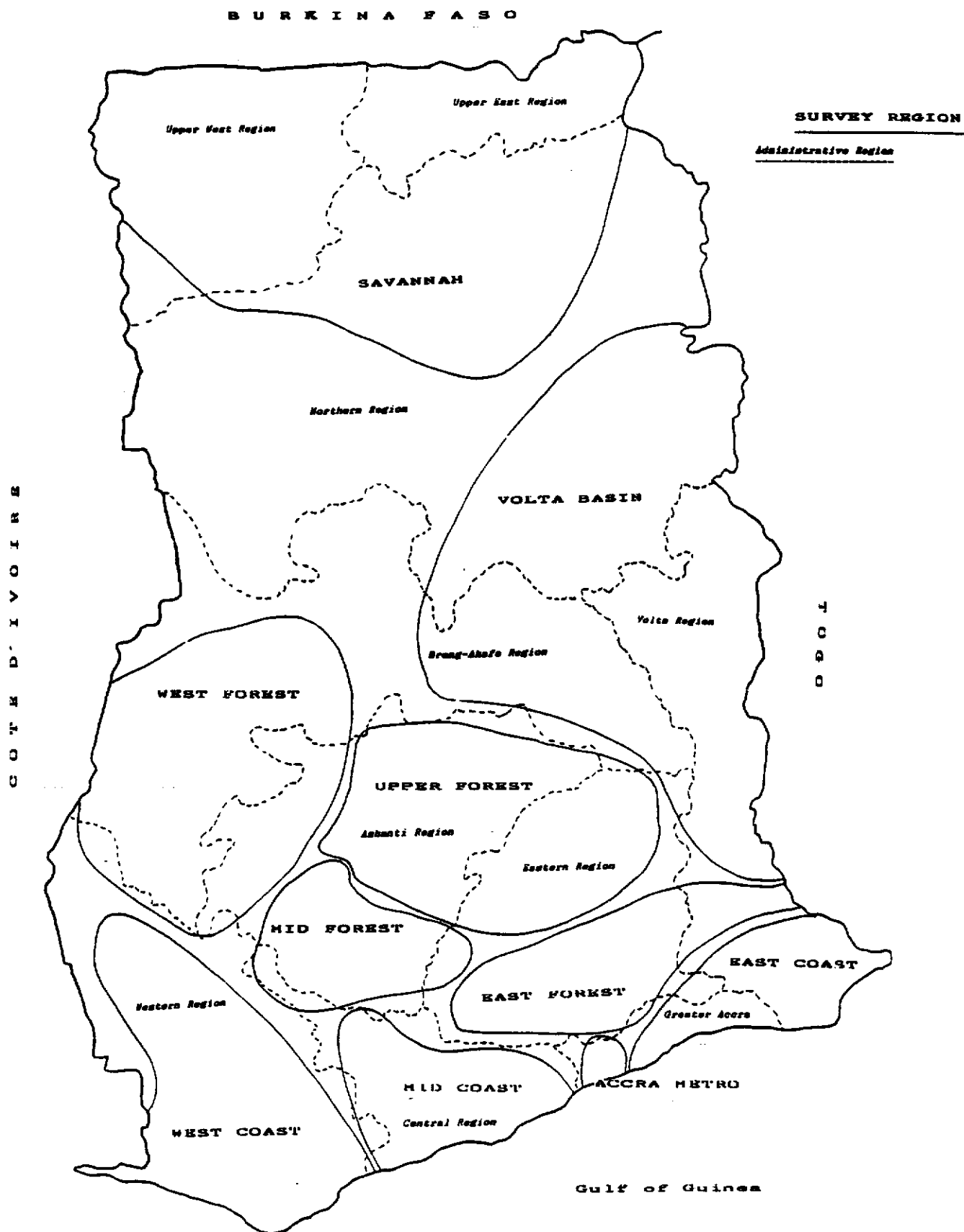


TABLE 5.1: Household demographics by region and by gender of household head

	male-headed households	female-headed households	all households
• number of households (%)	2222 (70.9)	914 (29.1)	3136 (100.0)
• number of hh members (%)	11273 (74.8)	3798 (25.2)	15071 (100.0)
• household size	5.1	4.2	4.8
• % of household members that are female	48.8	63.4	51.0
• % of all females reside in:	68.7	31.3	100.0
• % of all females < 15 reside in:	72.3	27.7	100.0
• % of all females 15 < 60 reside in:	68.3	31.7	100.0
• % of all females > 60 reside in:	44.2	55.8	100.0
• % of all children (< 15) reside in:	73.2	28.8	100.0

REGION	no. hh's	mean number of individuals per household by age, sex								%fhoh
		no. <15	%fem	no. 15<60	%fem	no. >60	%fem	hhsz	%fem	
Accra Metro	320	1.7	49.7	2.2	49.8	.1	38.1	4.0	49.4	23.5
Mid Coast	317	1.9	48.9	1.9	55.4	.3	60.2	4.2	51.8	36.0
West Coast	320	2.3	51.8	2.1	51.2	.2	38.1	4.6	50.9	26.6
East Coast	304	2.0	47.0	2.2	53.0	.3	58.7	4.4	50.7	38.8
East Forest	318	2.2	53.5	2.4	49.9	.3	58.7	4.8	51.9	28.6
Mid Forest	315	2.1	50.1	2.1	53.8	.2	58.2	4.5	52.1	34.0
West Forest	320	2.7	51.9	2.4	53.6	.3	57.9	5.4	53.0	32.8
Upper Forest	314	2.3	48.3	1.9	55.9	.2	58.9	4.5	52.1	43.9
Volta Basin	287	2.9	49.3	2.8	53.0	.3	44.6	6.0	50.8	20.9
Savannah	320	2.5	43.3	2.7	52.4	.5	45.8	5.6	47.9	8.4
Gter Accra	351	1.6	49.6	2.1	50.1	.1	34.2	3.9	49.4	24.8
other urban	828	2.2	50.2	2.2	52.7	.2	60.7	4.8	52.0	32.9
rural	1958	2.4	48.8	2.3	53.1	.3	50.7	5.0	50.9	28.4
GHANA	3136	2.3	49.2	2.3	52.7	.3	52.3	4.8	51.0	29.1

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by the 'other urban' cluster classification (32.9% of these households are female-headed).

5.2.2 Initial Conditions and the Ability to Respond

The ability of the individual to respond positively to changes wrought by economic adjustment is likely to be influenced by their *initial conditions* in terms of living standards and capital endowment. If these initial conditions differ by gender, this strengthens the justification for pursuing a gender differentiated analysis of burdens and opportunities associated with adjustment.

Although prior analysis of the 1974/75 Ghana Household Budget Survey has indicated that female headed households account for disproportionately high levels of food poverty (Kyereme and Thorbecke 1987), Ewusi (1976) analysed income data from the same survey and found that 73% of female headed households fall below a poverty line (\$100 per capita household income) compared to 76% of male headed households. Clearly, the robustness of association between women and poverty needs to be tested with a variety of poverty measures.

Table 5.2 demonstrates a positive association between women and poverty measured as the food share of the budget. Food share is defined as the budget share of the sum of food expenditure and the respondents own valuation of their home produced food commodities (Johnson et. al. 1989a,b) with the analysis proceeding on the assumption that Engel's 'Law' holds for the survey sample. Of households in the poorest group (foodshare quintile 5) 33.4% are female headed, as opposed to 21.0% in the least poor group. In terms of all household members, although 52.7%

TABLE 5.2: Food budget share and gender

food share quintile	food share	% of hh's that are female- headed	% of household members by age group that are female			n
			all	<15	15-60	>60
1	45.2	21.0	49.6	49.8	49.8	45.5
2	60.0	25.5	51.1	49.9	52.5	48.8
3	68.8	32.1	49.8	47.7	51.9	48.6
4	76.7	33.3	52.1	50.4	52.9	58.0
5	86.6	33.4	52.4	48.4	58.2	56.1
ALL	67.5	29.2	51.0	49.2	52.7	52.3
						3036

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of the individuals between the ages of 15 and 60 in the sample are female, in the poorest group, 56.2% of adults in this age group are female while for the least poor group the number is 49.8%. This result is more pronounced for individuals 60 years of age or older, although non-existent for children under 15.

So at the national level, gender of hoh and the food share poverty measure seem to be related (although we are assuming men and women hoh's have similar propensities to consume food). However, in view of the regional dimension described in section 4.3.2, perhaps this simply reflects a disproportionate number of fhoh's being located in the poorer regions. Table 5.3 confirms that the association between women and larger food budget shares is maintained for 8 out of the 10 survey regions. Surprisingly, the result is reversed for the two northern regions (Savannah and Volta Basin), precisely the opposite of what Norton (1988) has reasoned. Correspondingly, the rural-urban breakdown employed in Table 5.3 demonstrates the widest male- female hoh gap to be in the urban areas.

The robustness of these results needs to be assessed by replication with alternative poverty measures, such as the Foster, Greer, and Thorbecke (1984) family of P_α measures. For the two poverty lines constructed in Boateng, Ewusi, Kanbur, and McKay (1989), Table 5.4 presents P_α calculations ($\alpha = 0, 1, 2$) for groups disaggregated by gender, and gender of household head and, in addition, the contribution of these groups to overall poverty. For the upper poverty line (below which lie 36% of the sample), the P_0 measure indicates a higher incidence (headcount) of poverty in the female and fhoh groups. This relationship gets weaker as we become more concerned about the depth

TABLE 5.3: Food share by gender of household head by region

Region	male headed hh		female headed		all household	
	food share	N	food share	N	food share	N
Accra Metro	58.3	236	63.6	73	59.5	309
Mid Coast	65.0	201	70.2	110	66.8	311
West Coast	64.3	232	68.5	85	65.4	317
East Coast	62.1	191	66.0	111	63.5	302
East Forest	68.3	222	70.7	88	69.0	310
Mid Forest	60.6	194	68.0	102	63.2	286
West Forest	66.1	214	70.2	104	67.4	318
Upper Forest	71.4	170	78.7	132	74.6	302
Volta Basin	70.0	227	67.2	60	69.4	287
Savannah	75.9	286	71.7	26	75.8	312
greater Accra	57.2	257	63.1	85	58.6	342
other urban	60.7	542	66.1	265	62.5	807
rural	70.4	1376	72.8	541	71.1	1917
all	66.5	2175	68.8	881	67.4	3066

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TABLE 5.4: Poverty indices by gender and gender of household head

'hardcore' poverty line								
group	% popn	Pa value			n<line n	% contribution to poverty		
		P0	P1	P2		P0	P1	P2
males	49.0	0.0704	0.0168	0.0081	510	47.7	48.5	49.2
females	51.0	0.0741	0.0172	0.0060	559	52.3	51.5	50.8
all	100.0	0.0723	0.0170	0.0060	1069	100.0	100.0	100.0
in male hoh	74.8	0.0717	0.0180	0.0067	792	74.1	79.3	83.7
in fem hoh	25.2	0.0742	0.0140	0.0040	277	25.9	20.7	16.3
all	100.0	0.0723	0.0170	0.0060	1069	100.0	100.0	100.0
'poor' poverty line								
group	% popn	Pa value			n<line n	% contribution to poverty		
		P0	P1	P2		P0	P1	P2
males	49.0	0.3457	0.1124	0.0504	2503	47.5	47.8	48.0
females	51.0	0.3672	0.1180	0.0524	2771	52.5	52.2	52.0
all	100.0	0.3567	0.1153	0.0514	5274	100.0	100.0	100.0
in male hoh	74.8	0.3451	0.1139	0.0518	3814	72.3	73.9	75.3
in fem hoh	25.2	0.3910	0.1193	0.0503	1460	27.7	26.1	24.7
all	100.0	0.3567	0.1153	0.0514	5274	100.0	100.0	100.0

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of poverty ($\alpha = 1, 2$), and the poverty rankings actually reverse for the male-female hoh comparison at P_2 :- this is reflected in the disproportionate contribution of male hoh's to overall poverty at $\alpha = 2$ (75.3% compared to a population share of 74.8%). For the lower poverty, or 'hardcore' line (below which lie approximately 7% of the population) the incidence of poverty is higher for both females and fhoh's, but for $\alpha = 1, 2$ the poverty rankings are reversed. The result is most striking for the female hoh group using the P_2 measure, where 25.2% of the population (i.e. those in fhoh's) account for only 16.3% of national poverty.

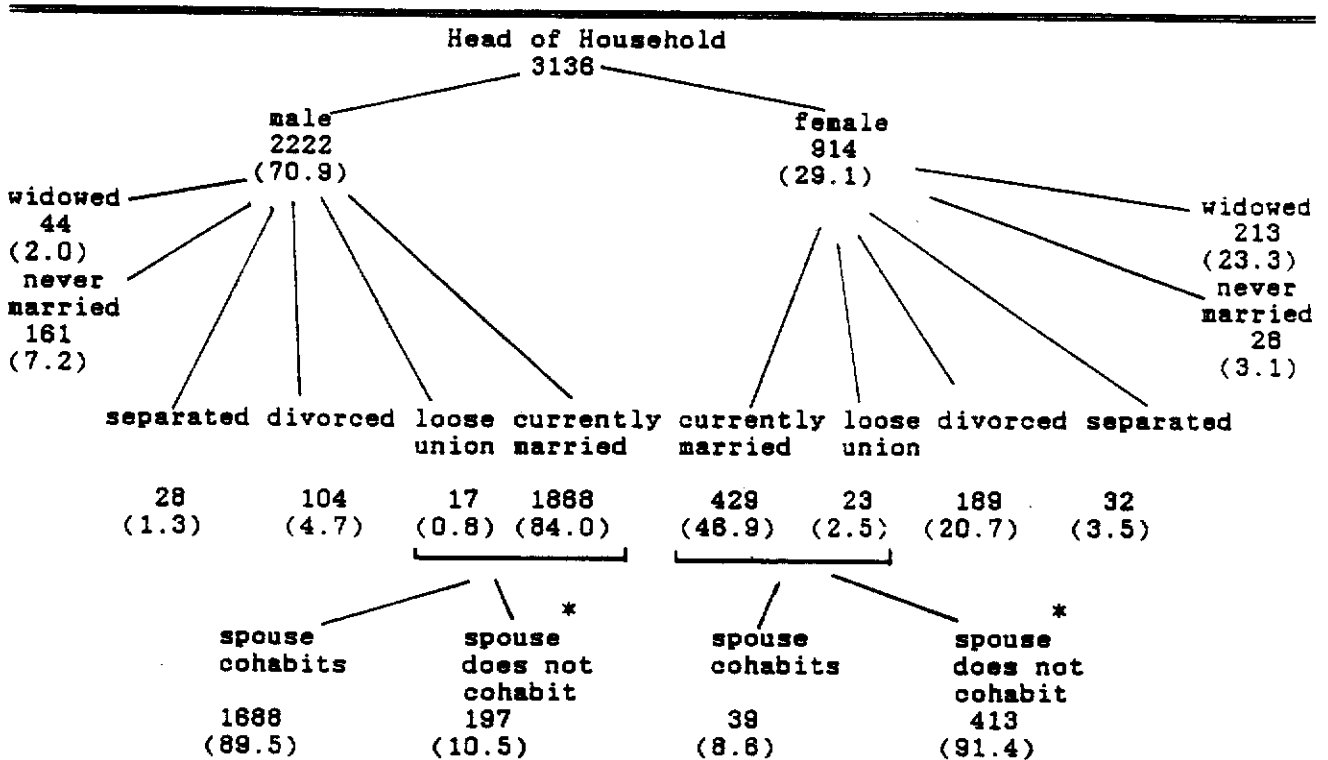
For the monetary-based P_α measures at least, it seems that although the proportion of people below the poverty lines in the female and fhoh groups is higher than in the male groups, the distance below the line, or the depth of poverty, is greater for the latter groups.

5.2.3 De Jure Versus de Facto Female Headed Households

Tables 5.1 to 5.4 employ a **self-reported** classification of gender of household head. However, the implicit assumption - that the ratio of dependents (those outside the 15-60 age range) to household size is greatest in fhoh's (and therefore inhibits the ability to respond to adjustment) - must be tested.

To get an idea of the origins of de jure fhoh's, Table 5.5 disaggregates heads of household by gender, marital status, and whether there is evidence of spouse cohabitation. Just under half of the female headed households are currently married or in a 'loose union', with

TABLE 5.5: Marital status of household head



* - in this instance, spouse is not classified as a household member

Note: frequency breakdowns do not include missing values

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91.4% of these husbands not cohabiting. Of the male headed households, 84.8% are married or in a 'loose union', with 89.5% of these men having cohabiting wives. Nearly all the *de jure* fhoh's seem to be *de facto* (only 39 husbands cohabit), but what of the 1688 mhoh's who are involved in a conjugal union with cohabiting wives? How many of these wives are in fact sole/major supporters (i.e. *de facto* household heads) of dependents?

Ignoring *de jure* status for the moment, Table 5.6 presents a bivariate distribution of households along axes corresponding to the number of 'adult' men and women (i.e. between the ages of 15 and 60) they contain. The exact age cutoffs are admittedly fairly arbitrary, but are validated by later tables which present occupational activity by age group by gender. The diagonal of the top panel of table 5.6 represents the cell frequencies for households with equal numbers of males and females (m,f) between the ages of 15 and 60. By far the most numerous cell (950) corresponds to households with one man and one woman in this age range.

Households above the diagonal represent households with more adult women than men and vice versa for households below the diagonal. The distribution around the diagonal is far from symmetric: for instance, 117 households contain 2 adult women and no adult men, while for only 40 households is the reverse true. While this is an interesting finding (either women are more likely to end up in this situation or are less able to extricate themselves from it, or both), it is most relevant in terms of dependency ratios - if adults in households above the diagonal only have to take care of themselves, then the relevance of the household classification in question (hhdtype) in assessing an

TABLE 5.6: Household classification by number of males and females in 15-60 age group (hhdtype)

a. Cell Frequencies

		number of females in hh between 15 and 60 years old									
		0	1	2	3	4	5	6	7		
number of males in household 15-60	0	155	471	117	38	8	3			792	
	1	399	950	234	65	18	6	3		1675	
	2	40	192	131	50	14	5	1		433	
	3	11	64	45	18	8	2	4	2	154	
	4	8	18	13	8	5	3	1		58	
	5		6	5	5	2	1			19	
	6		1	1		1				3	
	7		1	1		1				3	
	8						1			1	
Column		613	1703	547	184	57	21	9	2	3138	
Total		19.5	54.3	17.4	5.8	1.8	.7	.3	.1	100.0	

b. Dependency Ratios

		number of females in hh between 15 and 60 years old				
		0	1	2	3	
number of males in household 15-60	0	100.0 (155)	57.0 (471)	52.4 (117)	41.9 (38)	(cell frequencies in parentheses)
	1	11.8 (399)	48.8 (950)	48.6 (234)	47.4 (65)	
	2	25.5 (40)	43.2 (192)	42.9 (131)	42.6 (50)	
	3	28.6 (11)	38.2 (64)	43.6 (45)	38.1 (18)	

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individual's ability to respond to economic adjustment is reduced. However, as the lower panel of Table 5.6 demonstrates, dependency ratios (calculated as the number of people outside the 15-60 range divided by household size) are much higher above the diagonal than below it. Whatever factors lead to the disproportionate number of households in which adult men are relatively scarce, they also ensure that the dependents (children and the elderly) remain the woman's responsibility.

The main virtue of the disaggregation in Table 5.6 seems to be the ability to relatively accurately identify a household with a high proportion of dependents and the associated strain on the major income generators. In addition to this vulnerability, Table 5.7 indicates these households (those above the diagonal) are the poorest, according to the P_0 criterion (both poverty lines). However, this result is clouded by the use of *per capita* total expenditure to classify individuals above and below the poverty line. Households above the diagonal are likely to contain more children, and in the absence of appropriate adult equivalent scales, per capita household total expenditure is likely to be underestimated for these households.

However, Table 5.8 undermines this suspicion, in that differences in food budget share (an alternative poverty indicator) among household demographic types (hhdtype) are as predicted with P_0 . For example, (0,1) (m,f) households are poorer than (1,0) households while the same conclusion holds true for the (0,2) - (2,0) comparison but not for (0,3) - (3,0). The poorest of the larger groups is the (0,0) cell for female headed households. Table 5.8 also demonstrates the close correspondence between *de jure* fhoh and *de facto* fhoh's: 87.5% of (0,1)

TABLE 5.7: Incidence of poverty by household demographic type (hhdtype) for two poverty lines

		male headed households				female head households				all households			
n,f		% hardcore	% poor	nm	% hardcore	% poor	nm	% hardcore	% poor	nf	% hardcore	% poor	nm
0,0		13.7	32.4	139	7.7	38.5	143	10.6	35.5	282			
0,1		.8	27.7	284	7.6	35.9	1241	6.4	34.5	1505			
0,2		10.1	49.3	148	15.5	40.3	407	14.1	42.7	555			
0,3		10.6	19.7	68	15.6	42.2	154	14.1	35.5	220			
1,0		1.0	8.9	481	17.6	50.0	68	3.1	14.0	549			
1,1		4.9	26.0	3803	3.7	44.7	405	4.8	27.8	4208			
1,2		7.1	46.3	1180	3.3	39.1	298	6.4	44.8	1479			
1,3		22.6	46.2	411	3.8	34.1	132	18.0	44.8	543			
2,0		0.0	15.5	103	0.0	40.0	25	0.0	20.3	128			
2,1		7.4	35.1	932	0.0	17.5	143	6.4	32.7	1075			
2,2		8.2	42.9	794	12.3	38.0	187	9.0	42.0	981			
2,3		3.7	29.7	374	0.0	35.5	93	3.0	30.8	467			
3,0		0.0	16.7	42	0.0	0.0	10	0.0	13.5	52			
3,1		2.8	40.2	393	0.0	15.7	51	2.5	37.4	444			
3,2		11.7	40.4	368	0.0	28.9	45	10.5	39.2	411			
3,3		7.7	31.4	156	0.0	75.0	24	6.7	37.2	180			
all		7.2	34.5	11052	7.4	39.1	3734	7.2	35.7	14786			

Lower (Hardcore) Poverty Line

male hoh					female hoh					all households				
women	0	1	2	3	women	0	1	2	3	women	0	1	2	3
men 0	13.7	0.8	10.1	10.6	0	7.7	7.6	15.5	15.6	0	10.6	6.4	14.1	14.1
1	1.0	4.9	7.1	22.6	1	17.6	3.7	3.3	3.8	1	3.1	4.8	6.4	18.0
2	0.0	7.4	8.2	3.7	2	0.0	0.0	12.3	0.0	2	0.0	6.4	9.0	3.0
3	0.0	2.8	11.7	7.7	3	0.0	0.0	0.0	0.0	3	0.0	2.5	10.5	6.7

Upper (Poor) Poverty Line

male hoh					female hoh					all households				
women	0	1	2	3	women	0	1	2	3	women	0	1	2	3
men 0	32.4	27.7	49.3	19.7	0	38.5	35.9	40.3	42.2	0	35.5	34.5	42.7	35.5
1	8.9	26.0	46.3	48.2	1	50.0	44.7	39.1	34.1	1	14.0	27.8	44.8	44.8
2	15.5	35.1	42.9	29.7	2	40.0	17.5	38.0	35.5	2	20.3	32.7	42.0	30.8
3	16.7	40.2	40.4	31.4	3	0.0	15.7	28.9	75.0	3	13.5	37.4	39.2	37.2

TABLE 5.8: Food share by gender of household head and hhdtype

hhdtype (m,f)	male headed		female headed		all hholds		male hoh row% col%	female hoh row% col%	total col%
	% food share	nm	% food share	nf	% food share	n			
0,0	69.6	73	76.1	77	73.0	150	47.7 3.3	52.3 8.9	155 4.9
0,1	73.4	58	69.0	399	69.6	457	12.5 2.7	87.5 45.1	471 15.0
0,2	69.1	24	70.7	90	70.4	114	21.4 1.1	78.6 10.1	117 3.7
0,3	57.8	10	65.4	28	63.4	38	28.3 .5	73.7 3.1	38 1.2
1,0	62.2	375	70.6	18	62.6	393	95.5 17.1	4.5 2.0	399 12.7
1,1	67.2	841	72.6	90	67.7	931	90.4 38.7	9.8 10.0	950 30.3
1,2	69.1	174	69.5	54	69.2	228	76.9 8.1	23.1 5.9	234 7.5
1,3	65.6	44	64.9	20	65.4	64	67.7 2.0	32.3 2.3	65 2.1
2,0	63.5	34	68.8	4	63.8	38	90.0 1.6	10.0 .4	40 1.3
2,1	66.9	158	69.4	27	67.2	185	85.9 7.4	14.1 3.0	192 8.1
2,2	68.5	104	71.6	25	69.1	129	80.2 4.7	19.8 2.8	131 4.2
2,3	67.1	39	60.7	10	65.8	49	80.0 1.8	20.0 1.1	50 1.6
3,0	63.1	8	73.6	2	65.0	11	81.8 .4	18.2 .2	11 .4
3,1	66.6	56	69.3	8	66.9	64	87.5 2.5	12.5 .9	64 2.0
3,2	67.3	37	68.5	8	67.4	43	84.4 1.7	15.6 .8	45 1.4
3,3	69.2	14	73.0	3	69.8	17	83.3 .7	16.7 .3	18 .6
all	66.5	2175	69.9	891	67.4	3066	2222 70.9	914 29.1	3136 100.0

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households are female headed, while 95.5% of (1,0) households are male-headed.

One final measure of poverty (wealth) is the absence (presence) of durable consumption goods from the household (hh). Table 5.9 presents the mean age of hh durables, mean number of hh durables, and the % of households with at least one hh durable. Compared to female hoh's, male hoh's have a greater number of durables which are also newer, on average. Again, the direction of the difference is as expected because fhoh's are smaller than mhoh's, but the magnitude is large, especially considering that many of the fhoh's were the same size as mhoh's before they became fhoh's (e.g. through death of the husband). For example, 61.8 % of fhoh's do not possess a single durable listed on the questionnaire, while for mhoh's this figure is only 39.2%. An above/below the diagonal (hhdtype) analysis of durable ownership reveals patterns similar to those observed in the food share and P_{α} analyses: (1,0) households do better than (0,1); and (2,0) households do better than (0,2) although patterns are reversed for the other comparisons.

In summary, rather than being an indicator of the absolute poorest groups, the hhdtype classification may be a useful indicator of a household's ability to respond to economic adjustment. Where the dependency ratio is high, time and money constraints will be tighter and may preclude much scope for substitution. The policy usefulness of this demographic (hhdtype) classification will be evaluated in an on-going manner, by employing it as a disaggregation in the tables to come.

TABLE 5.9: Consumer durable possession by region, hhdtype, and gender of household head

household type (m,f)	mean age of hh durables	mean no. of hh durables	% of hh's with at least one durable	n
0,0	13.32	.17	12.3	155
0,1	10.21	.62	35.5	471
0,2	12.21	.82	45.3	117
0,3	13.35	1.39	57.9	38
1,0	8.55	.81	49.1	399
1,1	8.49	1.36	60.0	950
1,2	9.95	1.37	66.7	234
1,3	11.20	1.58	67.7	65
2,0	8.55	1.25	52.5	40
2,1	10.16	1.48	56.8	192
2,2	10.61	1.80	64.1	131
2,3	8.89	1.76	76.0	50
3,0	11.83	1.64	54.5	11
3,1	8.92	1.55	62.5	64
3,2	9.98	2.27	77.8	45
3,3	9.68	1.67	72.2	18
male hoh	9.04	1.44	60.8	2222
fem hoh	10.27	.69	38.2	914
Accra Metro	7.71	2.90	79.6	319
Mid Coast	8.60	.58	35.3	317
West Coast	7.71	1.14	54.7	320
East Coast	10.94	1.62	61.8	304
East Forest	10.05	.99	51.6	318
Mid Forest	9.43	1.26	50.2	315
West Forest	9.84	.97	54.7	320
Upper Forest	10.63	.59	39.5	314
Volta Basin	10.39	1.24	61.3	287
Savannah	8.42	.90	53.4	320
Accra	7.52	2.87	79.5	351
other urban	8.45	1.48	58.8	826
rural	10.26	.81	47.6	1957
all hh	9.29	1.22	54.2	3136

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Finally, where in Ghana are these high dependency/fhoh's households to be found? From Table 5.10 we can see that the hinterland areas for Accra and Kumasi (east and mid Coast for Accra, and west, mid, and upper Forest for Kumasi) have both the highest proportion of *de jure* fhoh's and *de facto* fhoh's. For example, in the Savannah and Volta Basin areas approximately 7% of households are of the (0,1) type, while in the forest and coastal areas the proportion is almost three times as large. Although the poorest households reside in the north, the largest proportion of households in which females are the economic providers is to be found in the central forest regions.

5.3 Occupational Patterns

This section examines primary and secondary occupational patterns, respondent-parent occupational patterns and tree-crop age-profile patterns to introduce a time dimension for evidence of the individual's ability to thrive.

5.3.1 Trends in Primary Occupational Patterns

The attempt to use previous census data in charting trends in occupation is undermined by definitional and classification changes across the 1960, 1970, and 1984 censuses. Fortunately, agriculture has a relatively unequivocal definition and this allows us to compare censuses and note that although the proportion of females working in the agricultural sector (as opposed to other sectors) declined from 1960 to 1970, they nevertheless constitute a growing percentage of the agricultural labour force. As mentioned in section 4.2, this percentage

Table 5.10: Dependency ratios by region,
hhdtype, and gender of household head

REGION																				
accra metro		mid coast		west coast		east coast		east forest		mid forest		west forest		upper forest		volta basin		savanna		
M,F	DR	%	DR	%	DR	%	DR	%	DR	%	DR	%	DR	%	DR	%	DR	%	DR	%
0,0	100	2	100	9	100	4	100	7	100	6	100	7	100	3	100	7	100	3	100	2
0,1	48	14	61	18	58	15	47	17	49	14	59	18	67	16	63	23	60	8	54	8
0,2	44	3	55	5	61	3	53	5	42	3	56	3	51	5	52	4	54	5	57	2
0,3	33	1	51	2	47	1	34	2	13	1	45	2	53	2	41	1	41	1	41	1
1,0	8	16	5	13	4	15	13	10	12	18	14	15	14	8	14	13	21	10	22	10
1,1	45	34	43	30	51	37	51	28	51	24	46	29	51	29	54	27	49	29	48	34
1,2	44	6	48	7	47	5	51	8	50	8	40	5	49	7	49	8	54	12	48	12
1,3	44	2	50	3	39	2	33	2	54	3	47	2	56	2	17	1	50	4	53	3
2,0	10	2	38	1	53	1	14	2	13	2	41	2	21	1	46	1	11	1	0	0
2,1	34	8	44	3	38	4	41	7	49	7	44	5	45	9	45	5	45	6	46	8
2,2	34	3	42	2	43	4	37	4	42	3	43	3	48	6	40	3	46	5	44	8
2,3	33	1	51	1	47	2	26	1	32	2	52	1	46	4	40	1	61	1	44	2
3,0	25	0	0	0	50	0	38	1	.	.	.	.	38	1	.	.	25	1	0	0
3,1	40	3	47	1	37	2	33	3	50	1	45	2	28	1	45	2	34	4	34	3
3,2	27	1	48	1	45	2	23	1	48	3	44	2	54	2	43	2	29	1	49	2
3,3	27	1	14	0	53	1	50	0	44	1	41	1	.	.	0	0	33	1	50	1
male hoh	36	76	41	64	41	73	43	63	41	71	40	66	46	67	46	58	47	79	45	92
fem hoh	43	24	59	36	55	27	50	37	49	29	59	34	59	33	59	44	48	21	43	8
ALL N	37	100	48	100	45	100	46	100	44	100	47	100	50	100	52	100	47	100	45	100
	319		317		320		304		318		315		320		314		287		320	

Notes:

- DR = (no. of household members outside the 15-60 age range) / (household size)
- % = relative frequency breakdown of (m,f) hhdtypes within region

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was 36.6 in 1960, 43.2 in 1970 (Ewusi 1987) and 51.0 in 1984 (Ardayfio 1989).

The GLSS data present a similar picture, with 58.9% of working males (aged 7 and over) listing agriculture as their primary occupation during the 7 days prior to interview, with 51% being the corresponding figure for females. Of all individuals (aged 7 and above) listing their primary occupation in the 7 days prior to interview as agriculture, 47.5% were female. Table 5.11 presents an age breakdown of the percentage of females in 8 broad primary and secondary activity groupings by reference period (7 days and 12 months) for all Ghana. Examining the top panel we can see that the female percentage of individuals primarily employed in agriculture is above 50 between the ages of 22 and 60. The female percentages are even higher if we use the 12 month occupational classification of the second panel: this reflects the 58:42 female:male % breakdown of those reporting no economic activity in the 7 days prior to interview.

However, the overwhelmingly female-dominated occupation group is 'sales' where 84% of individuals involved are female (7 day recall). This categorisation refers to the dominance of women in trading activities. While the proportion of all individuals (≥ 7 years old) involved in trading activities varies widely on a regional basis (from 28% in Accra Metropolitan to 7% in East Forest), the predominantly female nature of the labour force in this occupation is maintained across all the regions. Table 5.12 illustrates this point, and also shows the greater importance of agriculture as an employer in the more

TABLE 5.11: Primary and secondary occupational status by age, gender, and recall period

% of individuals in age group that are female							
main job, 7 day recall	age group					ALL	N
	7-14	15-21	22-45	46-60	gt 60		
none	48.5	54.9	65.8	60.7	50.7	58.2	1483
PROFESS	.	57.1	34.0	22.6	37.5	33.2	196
ADMIN	.	.	22.2	0.0	0.0	14.3	14
CLERICAL	.	18.7	35.7	7.7	0.0	29.9	107
SALES	74.6	84.9	84.9	77.8	91.3	83.7	808
SERVICE	66.7	54.6	35.3	11.8	5.3	30.6	180
AGRICULT	40.8	41.9	52.2	58.2	42.3	47.5	4491
PRD/TRSP	54.8	48.5	35.8	35.4	49.3	39.2	906
main job, 12 mo recall	7-14	15-21	22-45	46-60	gt 60	ALL	N
none	0.0	100.0	71.4	.	.	80.0	10
PROFESS	0.0	50.0	34.5	22.5	22.2	32.5	252
ADMIN	.	.	27.3	0.0	0.0	17.7	17
CLERICAL	.	12.5	35.4	14.3	0.0	30.3	122
SALES	78.1	87.7	86.3	78.2	89.3	85.2	983
SERVICE	66.7	50.0	37.0	19.1	5.0	32.2	208
AGRICULT	42.5	43.5	54.3	58.8	44.1	48.9	5803
PRD/TRSP	51.4	53.1	38.8	39.4	48.1	42.0	1010
second job, 7 day recall	7-14	15-21	22-45	46-60	gt 60	ALL	N
none	44.6	48.4	56.4	53.7	47.0	51.5	6958
PROFESS	0.0	100.0	21.4	0.0	0.0	21.1	19
ADMIN	.	.	.	.	.	.	0
CLERICAL	.	.	50.0	.	.	50.0	2
SALES	50.0	81.3	72.8	85.3	89.2	73.9	257
SERVICE	.	25.0	50.0	33.3	0.0	35.7	28
AGRICULT	68.8	54.6	37.9	30.9	36.4	39.3	605
PRD/TRSP	37.5	41.4	48.9	52.2	37.5	47.5	316
second day, 12 mo recall	7-14	15-21	22-45	46-60	gt 60	ALL	N
none	44.2	47.3	56.5	52.8	46.4	50.8	5929
PROFESS	0.0	100.0	18.7	0.0	0.0	13.8	29
ADMIN	.	.	.	.	.	.	0
CLERICAL	.	0.0	28.6	0.0	.	22.2	9
SALES	57.1	83.3	78.4	83.8	82.9	79.1	478
SERVICE	.	40.0	52.0	14.3	14.3	38.8	49
AGRICULT	60.0	51.2	40.6	38.0	39.1	41.8	1075
PRD/TRSP	40.0	47.5	53.2	55.8	40.0	51.1	616
ALL	44.8	49.2	54.5	52.4	48.5	51.1	8185

(. denotes empty cell)

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TABLE 5.12: Primary occupation (7 day recall) by gender:
agriculture and sales - within region

region	occupation	no. of individuals employed in occupation as a % of:			
		all individuals ≥ 7 yrs old	individuals ≥ 7 yrs old with primary occupation	% women in this occupation	% of 22-45 year olds in this occupation that are women
Accra	sales	28	33	77	82
	agriculture	8	9	37	28
M.Coast	sales	11	13	96	97
	agriculture	58	70	47	51
W.Coast	sales	11	13	78	79
	agriculture	53	63	41	50
E.Coast	sales	14	18	91	93
	agriculture	40	49	40	43
E.Forest	sales	7	8	81	82
	agriculture	61	70	44	45
M.Forest	sales	12	14	81	75
	agriculture	57	66	55	57
W.Forest	sales	6	9	79	85
	agriculture	54	78	52	55
U.Forest	sales	9	10	88	85
	agriculture	69	77	60	64
Volta B.	sales	9	11	83	86
	agriculture	62	73	45	52
Savannah	sales	4	5	89	90
	agriculture	69	86	44	52

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northern regions, with the majority of the labour force in the 22-45 age range being female.

• **Intergenerational Patterns**

One way of examining occupational trends in the context of a cross-section survey is to compare respondent-parent occupational patterns. In two-thirds of the age-occupation cells in Table 5.13 the percentage of females employed in the same occupation as at least one parent is higher than the corresponding figure for males. Although the result is not dramatic it does allow for the possibility of a greater intersectoral intergenerational mobility for males compared to females. The greatest parent-child occupational continuity (less than 10% leakage) is in agriculture, with an almost imperceptible higher level of female 'fixity'. Female occupational fixity relative to men is highest in the production and transport sector. The sales sector displays the most interesting patterns however:- there is a monotonic decline in female parent-respondent continuity as we move up the age groupings.

Unfortunately it is impossible to disentangle the two main explanations: (1) that the sales sector is an entry point into the labour force, and as individuals build up skills and experience they switch occupations as opportunities arise, or (2) if there is an intra-individual occupational fixity within the sales sector, then these figures in Table 5.13 imply that more women are entering the sales sector now than ever before:- an indication that they face barriers to entry in production-orientated activities.

However, figures from a household-level analysis of agricultural production (for various reasons individual-specific crop information

TABLE 5.13: Respondent-parent occupational patterns

% of individuals in same occupation as at least one parent*												
main job, 7 days	age group											
	7 < 15 male fem		15 < 21 male fem		21 < 45 male fem		45 < 60 male fem		≥ 60 male fem		all male fem	
professional					6 8 (98 51)		0 14 (28 7)			6 9 (131 65)		
admin/manag										0 0 (11 2)		
clerical					4 3 (54 30)					4 3 (75 32)		
sales	31 43 (16 47)		42 33 (19 107)		11 28 (73 410)		5 23 (20 84)		50 14 (4 28)	18 29 (132 876)		
services			40 17 (10 12)		14 14 (66 36)		2 15 (40 4)			14 16 (125 55)		
agriculture	95 94 (557 384)		95 94 (482 347)		93 96 (850 927)		94 97 (288 356)		92 97 (183 117)	94 95 (2380 2131)		
prodn/transp	50 71 (14 17)		19 37 (67 63)		15 20 (343 191)		21 23 (98 84)		21 35 (29 20)	18 27 (551 355)		
all	92 87 (588 450)		83 73 (586 534)		58 64 (1492 1847)		60 74 (488 518)		78 73 (232 189)	70 70 (3386 3316)		

* age-occupation cells (frequencies reported in parentheses) containing less than 20 individuals are left blank

[5.9]

was not/could not be collected in the survey) in Tables 5.14 and 5.15 suggest that female-headed households are able to participate in cash-crop production. As well as providing a regional breakdown of cropping patterns, Table 5.14 lists the proportions of male and female headed households that grow particular crops. Twenty-one percent of fhoh's grow cocoa, 28% grow oil palm and 14% grow peanuts while for male headed households the corresponding figures are, 29, 34, and 25 percent.⁸ Of course, a more detailed agricultural analysis is needed to establish the contribution of female headed households to the total quantities produced of these crops.

Some light is shed on the *time series nature* of the above cropping patterns by examining the *age profile* of tree crops by gender of head of household as in Table 5.15. Of the eight tree crops grown by at least 20 farms, fhoh's have higher proportions of younger trees for five (cocoa, coconut, plantains, bananas, and oranges) with mhoh's having a higher percentage of younger plantings in oil palm, other fruit, and cola nuts. Similar proportions of old trees across gender, means that these proportions are reversed for the proportion of trees in full production across gender of household head. Therefore, from this limited evidence, it seems that fhoh's have not been constrained in tree crop planting.

⁸ note also that 94% of fhoh's (compared to 84% of mhoh's) grew low labour input/poor nutritional quality cassava, while only 40% of fhoh's (compared to 47% of mhoh's) grew the more nutritious, but more labour intensive yam.

TABLE 5.14: Cropping patterns by region and gender of household head

% of households reporting crop cultivation activity (n=2283) that grow:													
crop grown	all Ghana	Accra metro	mid cst	west cst	east cst	east fst	mid fst	west fst	upr fst	volta basin	sav-nah	male hoh	female hoh
cocoa	27	5	34	44	0	22	51	47	26	17	0	29	21
coffee	1	0	0	3	0	0	0	0	0	4	0	1	0
rubber	0	0	0	0	0	0	0	0	0	0	0	0	0
coconut palm	6	2	19	23	1	8	4	3	0	0	0	7	3
oil palm	32	19	38	48	11	40	38	49	38	27	1	34	28
plantains	53	19	5	0	64	8	67	83	88	83	25	50	62
bananas	21	2	18	31	6	23	21	49	18	22	0	22	18
oranges	16	5	25	17	0	18	14	34	13	15	0	17	10
other fruit	11	2	3	15	1	9	32	27	2	5	7	12	10
timber	1	0	1	0	0	2	1	1	0	2	0	1	0
cola nut	11	2	7	17	0	5	13	22	15	13	0	12	7
kenef	2	0	0	0	0	0	0	0	0	0	14	2	0
cotton	0	0	0	0	0	0	0	2	0	0	1	0	0
peanut	22	19	1	8	18	3	1	25	23	31	78	25	14
tobacco	3	0	0	0	0	0	2	7	0	0	14	3	2
pineapple	10	7	9	29	1	7	9	29	2	4	0	11	8
sugarcane	6	7	16	12	9	8	4	5	0	1	0	6	4
cassava	88	81	94	97	9	97	98	95	98	88	30	84	94
yam	46	5	27	37	8	37	42	75	51	88	48	47	40
cocoyam	52	12	47	54	8	70	79	87	84	33	0	48	62
potato	5	14	3	3	15	2	1	3	2	4	9	5	2
maize	83	76	92	87	83	88	77	91	9	93	68	85	79
rice	11	7	3	8	5	1	5	8	2	15	47	14	3
sghum/millet	17	0	0	1	0	0	0	5	0	38	97	22	3
tomato	39	19	45	29	45	25	31	63	34	60	21	39	40
okro	47	19	37	33	51	21	31	71	31	79	64	48	40
garden egg	28	12	33	32	18	15	25	57	35	30	5	26	33
beans, peas	34	19	13	12	36	8	20	57	22	41	83	36	26
pepper	60	31	64	59	58	37	54	83	64	84	44	59	63
leafy veg	11	0	15	3	3	4	0	17	0	28	20	12	8
other veg	5	0	1	2	1	0	1	22	8	1	3	4	6
other crops	2	0	1	7	0	0	8	3	0	2	1	3	2

[d:\9\9bcrop.sys\9b.inc\9b.t2/5.10]

TABLE 5.15: Age profile of various tree crops grown,
by gender of head of household

crop	all households				male headed				female headed			
	% young	% full	% old	n	% young	% full	% old	n	% young	% full	% old	n
cocoa	46	43	10	809	45	45	10	485	53	35	11	124
coffee	24	75	1	19	21	77	1	17	50	50	0	2
rubber	0	100	0	1	0	100	0	1	0	0	0	0
coconut	46	50	4	134	48	51	3	114	49	45	6	20
oil palm	46	50	4	725	48	48	4	556	39	58	3	169
plantain	49	48	4	1188	48	49	3	815	50	47	4	371
bananas	37	80	4	446	35	82	4	344	43	54	4	102
oranges	33	64	3	291	32	85	2	241	38	56	4	50
oth fruit	32	64	3	240	34	63	3	184	27	70	3	56
wood	57	43	0	16	68	34	0	13	20	80	0	3
cola nut	17	78	4	199	19	76	5	159	13	88	1	40

Key: young = tree crop too young to produce
full = full tree crop production
old = near end of tree crop production

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5.3.2 Secondary Occupations

Focussing solely on primary occupations does not present a complete picture in a society where many individuals have secondary (and even tertiary) occupations. Secondary (7 day recall) activity was described by 17.4% of individuals 15 years old and above, with little gender difference in the incidence, but substantial differences in the pattern of second jobs (7 day recall). Secondary activity was most common amongst the professional classes, with sales being an important refuge for women, and agriculture serving this function for both sexes.

Table 5.16 indicates that in the 7 days prior to interview 81.1% of men and 84.0% of women aged 15 and over registered no secondary occupation (on a twelve month basis the figures were 68.0% for men and 68.7% for women, demonstrating the periodic nature of secondary employment).

Focussing on 7 day data, we can see that for both men and women, the 'professional' primary occupation category is most prone to secondary supplementation activity. Approximately 42% of primary professionals have a secondary occupation compared with around 19% for primary agriculturalists. Of male primary professionals, 38.2% have secondary jobs in agriculture, while for women primary professionals, 24.6% have secondary jobs in agriculture, but a significant proportion, 10.8%, have secondary jobs in sales (trading). For men, agriculture is the overwhelming site of second jobs, but for women, trading is a close second to agriculture as a secondary occupation. Of men primary agriculturalists, the main secondary occupation is in the production and transport sector (8.3%), while for women primary agriculturalists, 9.4% have secondary jobs in sales, and 7.1% have secondary jobs in production and transport.

TABLE 5.18: Primary occupations by secondary occupations (7 day recall)

by gender, individuals aged 15 and above

A. Primary Occupation by Secondary Occupation • MEN ≥ 15yrs •

		primary								
second	row % col %	none	profes	admin manage	clercl	sales	servic	agric	prodn trnspt	Row Total
none		17.4 99.8	2.8 57.3	.3 66.7	2.0 72.0	3.6 81.0	3.2 67.7	58.5 82.8	14.2 70.0	2642 81.1
professional			23.1 2.3					89.2 .5	7.7 .2	13 .4
admin/manag										0 0
clerical								100.0 .1		1 .0
sales			1.6 .8		1.6 1.3	3.3 1.7	1.6 .8	88.5 3.0	3.3 .4	61 1.9
service					5.6 1.3		18.7 2.4	66.7 .7	11.1 .4	18 .6
agriculture		.3 .2	13.8 38.2	1.1 33.3	5.2 25.3	5.2 16.4	9.4 27.4	23.5 4.7	41.4 27.9	362 11.1
prodn, tran			1.2 1.5			.6 .9	1.2 1.6	93.2 8.3	3.7 1.1	161 4.9
		460 14.1	131 4.0	12 .4	75 2.3	116 3.6	124 3.8	1803 55.3	537 18.5	3258 100.0

B. Primary Occupation by Secondary Occupation • WOMEN ≥ 15yrs •

		primary								
second	row % col %	none	profes	admin manage	clercl	sales	servic	agric	prodn trnspt	Row Total
none		23.5 100.0	1.3 58.5	.1 100.0	.8 78.1	17.8 85.1	1.3 75.5	48.9 80.6	8.2 72.5	2999 84.0
professional			25.0 1.5		25.0 3.1			50.0 .1		4 .1
admin/manag										0 0
clerical									100.0 .3	1 .0
sales			3.8 10.8			2.7 .8	.5 1.9	89.1 9.4	3.8 2.1	184 5.2
service						10.0 .2		90.0 .5		10 .3
agriculture			7.0 24.6		2.2 15.6	35.7 12.9	4.0 17.0	17.6 2.3	33.5 22.5	227 8.4
prodn, tran			2.0 4.6		.7 3.1	4.8 1.1	2.0 5.7	84.4 7.1	6.1 2.7	147 4.1
		708 19.8	65 1.8	2 .1	32 .9	829 17.6	53 1.5	1747 48.9	338 9.5	3572 100.0

This apparent gender equality in number of simultaneous economic activities must be viewed in the light of two factors: (1) table 5.16 gives us no idea of each individual's time commitment to each occupation and (2) women are likely to spend much more time in household/child care activities than their male counterparts. If the occupational time commitments are similar across gender then we can conclude that women face a heavy time burden:- explicit data on time allocation presented later on in this chapter bear this out.

5.4 Income Sources and Expenditure Patterns

The conclusions of the analysis of occupational patterns by gender are reflected by a more detailed examination of the sources of household income and subsequent expenditure patterns. Using the income and expenditure aggregates constructed by Johnson et. al. (1989a,b) Tables 5.17 and 5.18 disaggregate household income and expenditure by region, gender of household head, and hhdtype.

Taking income sources first in Table 5.17, and comparing across gender of household head within regions, it is obvious that female hoh's depend much less on wage income than their male hoh counterparts, especially in the Accra region where for male hoh's 45% of household income is from this source compared to 17% for female hoh's. Non-farm self employment is a larger income component for female hoh's, and in some regions the magnitude of this income source is twice that for male hoh's: - the distinction is particularly sharp for Savannah (40% : 13%). Outside of the Forest regions, agriculture is a more important income source for male hoh's than female hoh's (all Ghana: 54% to 43%). Remittances are much more important for female hoh's, being above 5% in every region except Savannah, and 11% overall.

The hhdtype breakdown in the bottom panel doesn't throw the above components into any sharper relief except that it becomes clear that remittances are mainly flowing to households where either the male (15 - 60 years) is absent (or there is a single older male), and that wage earners are well represented among (1,0) and (2,0) (m,f) households.

TABLE 5.17: Income sources by region, gender of hoh, and hhdtype

% of household income from:								
region	wage employ	agric	non-farm self-emp	rent	schol- arships	remit- tances	other sources	n
• MALE HEADED HOUSEHOLDS •								
Accra Metro	45	5	39	1	0	3	8	238
Mid Coast	13	53	28	1	0	2	1	177
West Coast	17	48	25	2	0	3	4	230
East Coast	21	34	35	2	0	1	5	182
East Forest	18	53	22	2	0	2	3	218
Mid Forest	31	38	19	1	0	3	6	186
West Forest	7	74	14	2	0	2	2	211
Upper Forest	7	61	25	1	0	2	2	170
Volta Basin	8	68	21	2	0	1	1	218
Savannah	5	78	13	2	0	1	0	282
ALL MALE HOH	16	54	23	2	0	2	3	2112
• FEMALE HEADED HOUSEHOLDS •								
Accra Metro	17	2	58	2	0	13	7	73
Mid Coast	5	21	63	1	0	8	1	108
West Coast	7	29	46	1	0	15	2	84
East Coast	6	27	49	2	0	11	4	109
East Forest	13	41	36	3	0	8	2	89
Mid Forest	16	44	26	1	1	14	4	98
West Forest	4	68	13	2	0	14	1	99
Upper Forest	2	87	19	1	0	10	1	133
Volta Basin	8	43	39	2	0	5	1	59
Savannah	10	47	40	1	0	2	0	27
ALL FEM HOH	7	43	35	2	0	11	2	877
all Ghana	14	52	26	2	0	4	3	2989

m,f	% of household income from:							n
	wage employ	argic	non-farm self-emp	rent	schol- arships	remit- tances	other sources	
0,0	8	57	16	4	0	10	4	148
0,1	7	43	32	2	0	13	3	447
0,2	4	40	39	2	0	10	3	112
0,3	9	36	42	3	0	5	5	38
1,0	27	44	18	2	0	5	4	383
1,1	18	53	24	1	0	2	3	901
1,2	9	58	27	2	0	2	1	224
1,3	8	48	37	2	0	2	2	62
2,0	17	40	27	3	0	7	3	38
2,1	14	54	22	1	0	3	3	184
2,2	12	54	26	2	0	3	2	125
2,3	10	58	26	2	0	2	1	48
all Ghana	14	52	26	2	0	4	3	2989

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TABLE 5.18: Expenditure patterns by region, gender of hoh, and hhdtype

region	% allocation of total (actual + imputed) expenditure						n
	cash food expend *	self-rep value of of home- produced food cons	self-rep value of of home- produced non-food consumpt	other cons expend	remitt paid out	expend corresp to pay in-kind	
• male hoh •							
Accra Metro	56.2	2.0	.9	35.0	3.0	2.9	238
Mid Coast	42.0	23.0	1.7	27.4	4.1	1.8	177
West Coast	41.8	22.5	1.8	28.7	2.9	2.3	230
East Coast	48.4	12.7	2.1	31.3	1.9	2.7	182
East Forest	44.1	24.2	1.7	28.5	1.6	1.9	218
Mid Forest	46.3	14.4	1.5	33.2	3.1	1.6	186
West Forest	32.6	33.5	1.2	28.6	3.3	.9	211
Upper Forest	40.6	30.8	1.2	23.7	2.2	1.5	170
Volta Basin	28.9	41.0	2.4	25.1	1.5	1.1	218
Savannah	24.1	51.9	.9	22.0	.8	.8	282
all male hoh	40.0	26.4	1.5	28.0	2.4	1.7	2112
• female hoh •							
Accra Metro	62.7	.9	1.3	31.8	2.5	.7	73
Mid Coast	58.3	11.9	3.3	24.5	1.3	.7	108
West Coast	54.8	13.7	3.1	25.3	2.3	.8	84
East Coast	58.5	7.4	2.5	28.7	2.1	.7	109
East Forest	55.8	14.9	2.3	24.5	1.0	1.5	89
Mid Forest	48.0	20.0	1.9	27.3	2.0	.8	98
West Forest	36.8	33.3	.9	26.7	1.8	.7	99
Upper Forest	41.4	37.3	1.0	19.2	1.1	.1	133
Volta Basin	41.9	25.3	2.3	28.3	1.8	.5	59
Savannah	38.9	32.8	3.6	22.0	2.3	.4	27
all fem hoh	50.3	19.8	2.1	25.7	1.7	.7	877

(m,f)	% allocation of total (actual + imputed) expenditure						n
	cash food expend *	self-rep value of of home- produced food cons	self-rep value of of home- produced non-food consumpt	other cons expend	remitt paid out	expend corresp to pay in-kind	
0,0	52.3	20.7	1.0	23.4	2.5	.2	149
0,1	50.4	19.2	1.9	25.9	2.0	.7	447
0,2	50.1	20.3	2.3	26.0	1.0	.3	112
0,3	47.2	18.2	2.5	30.8	2.7	.8	38
1,0	45.2	17.4	.8	29.3	4.7	2.8	383
1,1	40.8	27.0	1.7	27.0	1.9	1.7	901
1,2	38.5	30.7	2.3	26.3	1.3	.9	224
1,3	37.3	28.1	3.0	29.1	1.6	1.0	62
2,0	48.7	15.1	1.0	30.0	3.8	1.4	36
2,1	41.1	28.2	1.4	28.2	1.5	1.6	184
2,2	37.0	32.1	1.6	26.8	1.8	1.0	125
2,3	37.7	28.2	2.8	29.2	1.7	.5	48
all	43.0	24.5	1.7	27.3	2.2	1.4	2989

* - estimate (b) in Johnson et. al. (1989a)

To some extent, the expenditure disaggregations reflect the income sources. Households for which agriculture is a less important source of income purchase more of their food in the markets: this result is particularly prominent for female hoh's in Accra and the coastal regions. Consumption of domestic non-food production is a very small component of the value of expenditure for all households, but is larger for female hoh's (2.1% : 1.5%). The hhdtype disaggregation provides confirmation of association between women and this type of household production. For households containing 0, 1, or 2 males between the ages of 15-60 there is a monotonic rise in the proportion of expenditure value derived from domestic non-food production with the rise in the number of females between the ages of 15-60.

5.5 Nature and Tightness of Constraints

Here we focus on constraints in the sphere of decision making, time allocation and burdens, and access to other productive resources as further evidence on the individual's ability to thrive in an adjustment climate.

5.5.1 Household Decision-Making

This analysis uses data from section 7 of the questionnaire collected towards the end of the first round of data collection. Responses to the questions in this section enable the enumerator to target the most appropriate person to interview by questionnaire topic in round 2. There are two main problems here (i) there might be some discrepancy between the household member declared as the most knowledgeable on a

given subject, and the accuracy of that declaration and (ii) the best-informed individual does not necessarily hold the decision making power.⁹ Bearing these substantial caveats in mind, we take it at face value that individuals declared (perhaps euphemistically) as 'most knowledgeable' about a certain household activity are the actual decision makers.

The characteristics of individuals in the household who are 'best informed' about agriculture/livestock, main non-farm business, food purchases, other expenditures, and 'overall' are presented by region, gender of household head, and household demographic type in the three panels of Table 5.19.

The person best informed 'overall' about household members' activities is overwhelmingly the household head. The person best informed about agriculture/livestock is also usually the head of household, with this relationship being stronger amongst male-headed households. It is for the non-farm business and food purchasing categories that the predominance of the household head breaks down, but only for the male-headed households. For the latter households, the spouse was named as best informed about non farm business 52% of the time and 69% of the time for food purchases. However, a female household head typically maintains primary responsibility across all activities.

The sharpest gender division of labour occurs within the food purchasing sphere. For instance, in the third panel of Table 5.19 we

9 attempting to match up this self-declared knowledge with detailed evidence of primary involvement in that activity would prove an interesting area for further research.

TABLE 5.19: Best informed individuals by task by region,
gender of hoh, gender, age, and hhdtype

characteristics of person in hh who knows most about:											
region	overall		agricult /livestk		main non- farm busnss		food purchases		other expend		N
	% male	age	% male	age	% male	age	% male	age	% male	age	
Accra Metro	76	40	79	42	33	36	21	33	76	40	319
Mid Coast	84	45	69	45	23	37	17	38	84	45	317
West Coast	72	42	75	41	28	37	19	35	71	41	320
East Coast	83	45	72	44	34	40	12	38	82	45	304
East Forest	69	45	73	44	32	38	23	39	88	44	318
Mid Forest	85	43	58	42	34	39	19	37	84	42	315
West Forest	87	43	65	43	35	36	11	36	86	43	320
Upper Forest	55	44	50	44	38	37	18	38	56	43	314
Volta Basin	78	45	83	44	29	41	14	38	77	43	287
Savannah	89	45	90	45	22	40	12	36	89	44	320
male hoh	98	43	95	43	43	37	23	35	97	43	2222
fem hoh	1	45	6	45	5	39	0	40	3	44	914
all	70	44	71	43	31	36	17	37	89	43	3137

region	overall		agricult /livestk		main non- farm busnss		food purchases		other expend		N
	% hoh	% spse	% hoh	% spse	% hoh	% spse	% hoh	% spse	% hoh	% spse	
Accra Metro	98	1	89	11	53	41	40	48	98	1	319
Mid Coast	99	1	98	1	55	32	45	44	99	1	317
West Coast	98	2	92	6	58	36	42	48	97	3	320
East Coast	99	1	90	4	84	27	42	46	97	2	304
East Forest	96	2	90	6	53	35	46	42	91	5	318
Mid Forest	99	1	94	4	68	29	47	45	97	1	315
West Forest	98	1	92	3	52	33	39	51	95	2	320
Upper Forest	99	1	96	3	70	23	57	37	98	2	314
Volta Basin	98	1	93	3	53	40	29	59	90	5	287
Savannah	94	3	90	5	28	58	18	74	93	3	320
male hoh	98	2	94	5	41	52	22	69	96	3	2222
fem hoh	98	0	90	3	85	0	85	0	95	2	914
all	98	1	93	4	55	35	41	49	95	2	3137

characteristics of person in hh who knows most about:											
n,f	overall		agricult /livestk		main non- farm busnss		food purchases		other expend		N
	% male	age	% male	age	% male	age	% male	age	% male	age	
0,0	48	89	48	68	35	85	37	67	45	89	155
0,1	12	40	15	42	8	36	1	36	12	40	471
0,2	21	49	19	48	8	40	1	39	20	46	117
0,3	24	52	27	52	3	40	0	40	24	50	38
1,0	95	37	95	38	89	37	93	36	95	36	399
1,1	88	38	88	38	35	33	3	31	87	38	950
1,2	75	44	80	43	25	38	2	34	75	44	234
1,3	68	49	77	46	16	41	2	36	68	46	65
2,0	90	45	91	44	76	39	68	40	90	45	40
2,1	84	46	84	46	40	39	3	38	85	45	182
2,2	82	49	78	49	28	44	2	36	78	48	131
2,3	78	50	80	48	35	40	0	41	82	50	50
3,0	91	55	88	50	88	44	55	48	91	56	11
3,1	89	48	88	48	42	46	2	38	88	47	64
3,2	80	47	78	47	39	44	4	40	76	46	45
3,3	83	58	79	58	10	48	0	38	83	55	18
all	70	44	71	43	31	36	17	37	89	43	3137

can see the the % female responsibility for food purchases jumps from 7% in a (1,0) (m,f) household to 97% in a (1,1) household. The corresponding jump for the main non-farm business is 11% to 65%.

Regionally, the sharpest gender division of labour is in the Savannah region with the head-of-household's influence at a minimum for the 10 regions (for both male and female headed households) in the food purchasing and non-farm employment domains. We would expect this least developed region to be the purest in terms of traditional gender-specific tasks and duties.

We should remember that the questionnaire design itself is responsible for much of the apparent sharpness of the division of labour portrayed in Table 5.19. A questionnaire category for 'joint-best informed', or 'second best informed' would have proved enlightening.

5.5.2 Time Burden and Time Allocation

From section 5 of the questionnaire it was possible to construct a partial time allocation profile for each household member aged 7 and above. The profile consists of the number of hours spent in the 7 days prior to interview in three categories: main job, secondary job, and work in the home (including food preparation, household chores, fetching water/fuel).

Before we proceed to the analysis of these profiles it is important to evaluate the quality of the time allocation data. Enumeration problems aside, the main questionnaire problem seems to be the lack of a 'time spent in third (or more) job' question. Time allocation questions are

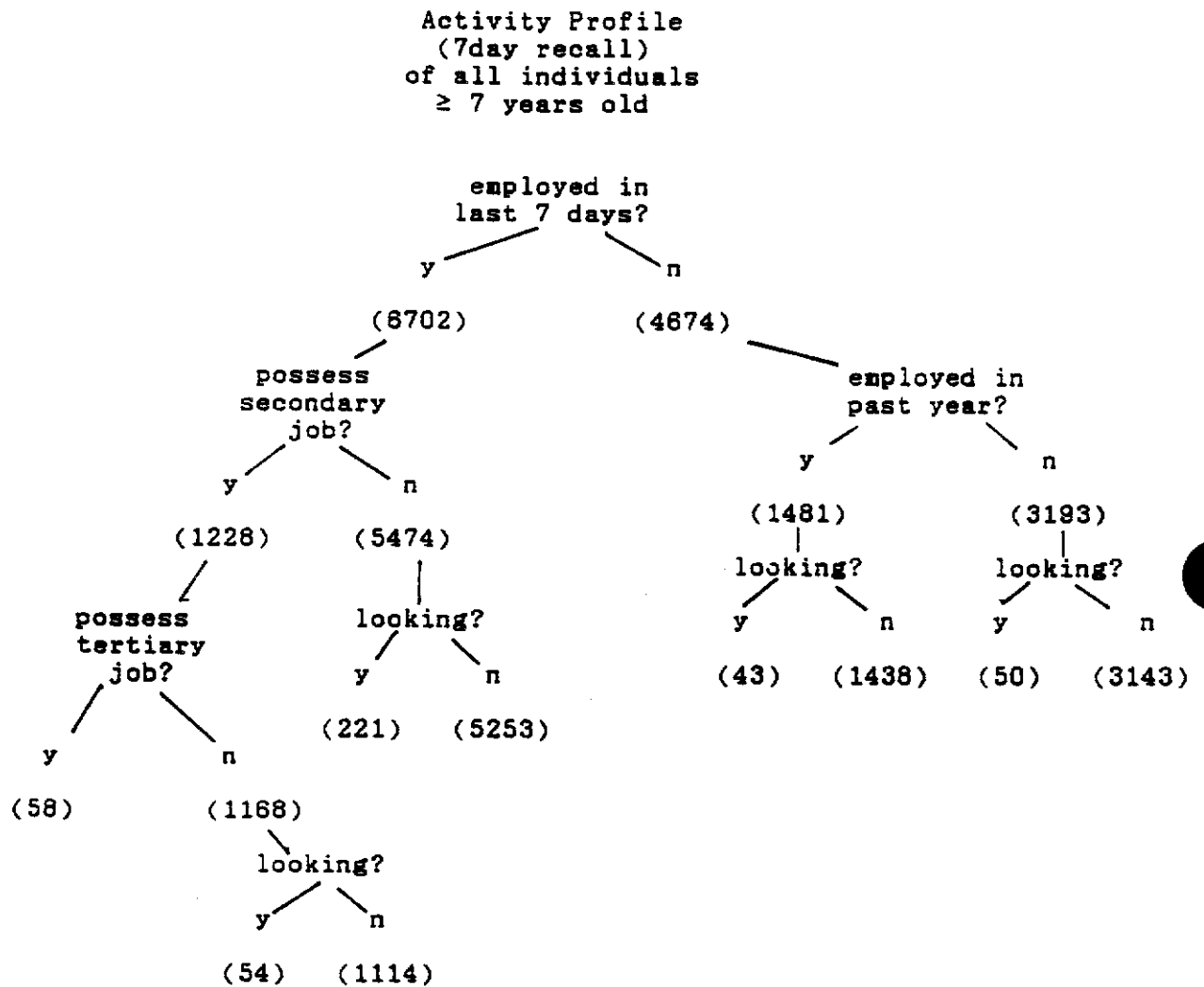
only asked with respect to two jobs; if an individual is employed in a tertiary occupation, the questionnaire asks about the wage rate but does not ask any questions about time spent in that occupation. This is not too much of a problem because as Table 5.20 shows only 58 respondents (out of 11,376) recorded income from a tertiary job. Another potential problem is that no hours in the previous week were allocated to job search. As Table 5.20 shows, 368 individuals (3.2% of respondents) were looking for paid work in the 7 day recall period. This figure is still small, but may systematically bias the results if the gender/relationship to household head composition of the searchers differs substantially from those not looking for jobs; fortunately this is not the case (data not presented here).

Tables 5.21 and 5.22 present individual time allocation by sex, age, and employment status of the individual, and by gender of household head.

Table 5.21 is a distillation of the immense amount of information presented in Table 5.22. From these tables a number of observations can be made:

- (1) Female time loads are approximately 20 - 25 % higher than those of males.
- (2) This female-male discrepancy is present across all age groups, number of jobs, and type of household.
- (3) The weekly absolute value of the discrepancy ranges from 6 hours (individuals in male headed households, at least two jobs) to 12 hours (individuals in female headed households, one job only).

TABLE 5.20: Primary and secondary employment patterns



Note: frequency breakdowns do not include missing values

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TABLE 5.21: Total time (hours) allocated to jobs and housework,
7 days prior to interview, by gender and gender of hoh

job	age group	all households		male household head		female hh head	
		male	female	male	female	male	female
one job only	22-45	46	54	47	55	38	52
		(1093)	(1285)	(1008)	(928)	(85)	(357)
	all	40	48	40	49	34	46
		(2753)	(2722)	(2411)	(1844)	(342)	(878)
at least two jobs	22-45	58	64	58	64	60	64
		(399)	(360)	(381)	(236)	(18)	(124)
	all	58	63	58	62	53	63
		(632)	(592)	(588)	(374)	(44)	(218)

(n)

[c:\5\5.inc/5.21]

TABLE 5.22: Time allocation by gender and age

hours/wk spent in job 1, job 2, hhold work, and travel to job 1 (7 dy recall)

1. individuals reporting only one job																		
males						females						all individuals						
age	job	job	hh	tra	tot	nm	job	job	hh	tra	tot	nf	job	job	hh	tra	tot	n
grp	1	2	wk	vel	-al		1	2	wk	vel	-al		1	2	wk	vel	-al	
7-14	19	0	10	0	29	570	18	0	18	0	34	430	19	0	12	0	31	1000
15-21	27	0	9	1	37	530	28	0	20	1	48	458	27	0	14	1	42	988
22-45	38	0	5	3	48	1083	30	0	23	1	54	1285	34	0	15	2	50	2378
46-59	38	0	4	2	45	322	30	0	21	0	51	345	34	0	13	1	48	887
>59	31	0	3	1	35	238	24	0	18	0	41	204	28	0	9	1	38	442
all	31	0	7	2	40	2753	27	0	20	1	48	2722	29	0	13	1	44	5477
2. individuals reporting at least two jobs																		
males						females						all individuals						
age	job	job	hh	tra	tot	nm	job	job	hh	tra	tot	nf	job	job	hh	tra	tot	n
grp	1	2	wk	vel	-al		1	2	wk	vel	-al		1	2	wk	vel	-al	
7-14	19	12	9	0	40	18	17	10	20	0	47	20	18	11	15	0	44	38
15-21	27	18	8	1	51	58	28	15	17	1	59	78	27	15	13	1	55	132
22-45	34	14	5	4	58	389	27	15	21	1	64	380	31	15	12	2	80	759
46-59	37	15	4	4	60	107	27	18	20	0	84	98	33	15	11	2	82	203
>59	34	18	2	2	58	52	28	20	14	0	81	40	31	19	7	1	58	92
all	33	15	5	3	58	832	27	15	20	1	83	582	30	15	12	2	58	1228
3. individuals from male-headed households, one job																		
males						females						all individuals						
age	job	job	hh	tra	tot	nm	job	job	hh	tra	tot	nf	job	job	hh	tra	tot	n
grp	1	2	wk	vel	-al		1	2	wk	vel	-al		1	2	wk	vel	-al	
7-14	20	0	9	0	29	448	19	0	18	0	35	318	20	0	12	0	32	765
15-21	28	0	9	1	37	408	29	0	20	1	50	323	28	0	14	1	43	731
22-45	38	0	5	3	47	1008	30	0	24	1	55	928	34	0	14	2	50	1938
46-59	38	0	4	2	45	315	28	0	22	0	50	194	35	0	11	1	47	509
>59	31	0	3	1	35	231	24	0	17	0	41	83	29	0	7	1	37	314
all	33	0	8	2	40	2411	28	0	21	0	49	1844	30	0	13	1	44	4255
4. individuals from male-headed households, at least two jobs																		
males						females						all individuals						
age	job	job	hh	tra	tot	nm	job	job	hh	tra	tot	nf	job	job	hh	tra	tot	n
grp	1	2	wk	vel	-al		1	2	wk	vel	-al		1	2	wk	vel	-al	
7-14	19	13	9	0	41	13	21	10	20	0	51	11	20	12	14	0	46	24
15-21	30	15	8	1	52	38	27	13	18	0	58	54	28	14	13	1	58	90
22-45	34	14	5	4	58	381	28	15	22	1	64	238	31	14	11	3	59	817
46-59	37	14	4	4	59	108	27	17	20	0	64	56	34	15	9	3	81	182
>59	34	18	2	2	58	52	21	21	14	0	58	17	31	19	5	1	58	89
all	34	14	4	3	58	588	28	15	21	1	82	374	31	15	11	2	58	982
5. individuals from female-headed households, one job																		
males						females						all individuals						
age	job	job	hh	tra	tot	nm	job	job	hh	tra	tot	nf	job	job	hh	tra	tot	n
grp	1	2	wk	vel	-al		1	2	wk	vel	-al		1	2	wk	vel	-al	
7-14	16	0	13	0	29	121	15	0	15	0	30	114	15	0	14	0	30	235
15-21	24	0	9	1	34	122	25	0	18	1	44	135	24	0	14	1	39	257
22-45	32	0	5	2	38	85	30	0	21	1	52	357	31	0	18	1	49	442
46-59	40	0	1	1	42	7	32	0	19	0	51	151	32	0	19	0	51	158
>59	29	0	3	0	32	7	25	0	18	0	41	121	25	0	15	0	40	128
all	23	0	9	1	34	342	27	0	19	1	46	878	28	0	16	1	43	1220
6. individuals from female-headed households, at least two jobs																		
males						females						all individuals						
age	job	job	hh	tra	tot	nm	job	job	hh	tra	tot	nf	job	job	hh	tra	tot	n
grp	1	2	wk	vel	-al		1	2	wk	vel	-al		1	2	wk	vel	-al	
7-14	19	9	9	0	37	5	13	10	19	0	43	9	15	10	18	0	41	14
15-21	22	17	7	2	48	20	25	18	17	2	61	22	23	18	12	2	55	42
22-45	31	20	9	1	60	18	28	18	19	1	64	124	28	18	18	1	64	142
46-59	84	24	0	0	108	1	27	18	20	0	64	40	29	18	20	0	65	41
>59	.	.	.	.	.	.	33	19	13	0	64	23	33	18	13	0	64	23
all	27	18	8	1	53	44	27	18	19	1	83	218	27	18	17	1	81	282

Notes: (1) (.) denotes empty cell

(2) travel time is reported only for those individuals who are not self-employed

- (4) The main source of the discrepancy is the much heavier commitment of women to household work. The general tendency is for women to spend 20 per week in this activity compared to the male contribution of 5 hours a week. Only one third of this is compensated for by a reduction in female time spent in employment outside the home, as women work about 27 hours to men's 31 hours for single job holders, and 42 compared to 47 hours for multiple job holders.
- (5) Males contribute most to household work during their younger years, while female household contributions remain high throughout the life cycle.
- (6) The multiple job holders are mostly in the 22-45 age group, and are evenly split among men and women.
- (7) The female time burden seems to hit an upper limit of 63-64 hours at the multiple job stage.

5.5.3 Fuel and Water Collection

This section is hampered by the fact that the questionnaire doesn't identify who usually undertakes these tasks. Indirect evidence in Table 5.23 points towards women as the main wood gatherers: notice that for a given number of adult men, as the number of adult women rises so too do the hours taken to gather wood (the reverse relationship does not hold for a constant number of adult females). This may indicate that with a greater number of adult women in the household more time is freed up for longer searches for higher quality wood. This is backed up with some time allocation data disaggregated by hhdtype (not presented here)

TABLE 5.23: Fuel and water utilisation by region, gender of hoh, and hhdtype

household type	% of hh using improved cooking fuel (not wood)	% of hh with improved source of drinking water	% of hh using electricity for lighting	% of hh with toilet (flush/ pan/ pit)	distance(m) to nearest drinking water source (unimprv.)	hours to gather wood	N
m,f	number of adult males and females in hh						
0,0	23.2	15.5	15.5	78.8	598.3	.9	155
0,1	31.4	28.8	22.7	74.7	552.7	1.0	471
0,2	29.1	25.6	25.6	76.9	488.3	1.0	117
0,3	34.2	28.3	39.5	84.2	602.1	1.2	38
1,0	47.9	30.8	34.8	78.2	512.8	.8	399
1,1	31.3	24.2	26.8	74.7	571.5	1.0	950
1,2	25.2	19.7	21.8	62.4	632.4	1.1	234
1,3	27.7	21.5	24.6	88.2	602.4	1.1	65
2,0	42.5	32.5	40.0	77.5	398.5	.9	40
2,1	27.1	22.4	28.1	74.5	518.8	1.0	192
2,2	20.6	19.1	22.9	71.0	523.0	1.1	131
2,3	18.0	18.0	26.0	80.0	422.6	1.3	
3,0	27.3	18.2	27.3	72.7	546.4	.8	11
3,1	32.8	25.0	21.9	67.2	734.9	.9	64
3,2	28.7	22.2	28.9	77.8	894.6	.9	45
3,3	22.2	27.8	27.8	72.2	587.1	.8	18
region							
Accra Met	94.0	95.0	78.4	59.6	441.4	.7	319
Mid Coast	20.8	7.9	14.5	76.7	587.4	.8	317
West Coast	33.4	18.1	29.1	89.1	442.8	.8	320
East Coast	54.9	42.8	32.9	79.6	713.7	1.0	304
East Frst	23.3	21.1	28.9	79.3	534.4	.7	318
Mid Frst	33.0	32.7	38.7	97.5	431.3	.8	315
West Frst	5.3	2.2	9.1	87.2	438.1	1.2	320
Upper Frst	12.4	10.2	16.6	88.0	543.8	.9	314
Volta Basn	12.5	5.8	7.7	58.2	750.0	1.1	287
Savannah	21.9	7.8	9.7	23.1	752.3	1.4	320
gender of hoh							
male	32.3	25.0	27.8	73.1	589.0	1.0	2222
female	28.8	23.3	24.1	75.0	535.7	1.0	914
all	31.3	24.5	26.7	73.7	573.3	1.0	3137
N	981	769	838	2311	2368	1834	3137

[d:\2\2.t3/5.23]

which show overall female time loads falling as the number of adult females within a household rises.

From Table 5.23 we can see that compared to individuals in male headed households, their counterparts in female headed households are marginally less likely to: use an improved cooking fuel, have an improved source of drinking water, or have electricity for lighting: results consistent with the monetary based welfare measures of section 5.2.2. However, despite more female than male hoh's using wood as a cooking fuel, in data not shown here, 22% of these households purchase wood as opposed to a 12% purchase rate for male hoh's. Moreover, this result holds within every region which partially controls for distance to wood. Poorer households having to purchase rather than collect wood is likely to reflect a tighter time constraint. No discernible patterns could be identified from an analysis of water sources and distances to them.

5.5.4 Access to Other Productive Inputs

• Land

Area cultivated per household was calculated from section 9a of the questionnaire, taking into account land rented in and out from the household's holdings. Table 5.24 presents area owned and area cultivated in per capita units for all own-account cultivator households (n=2186). On average, male hoh's cultivate 7.8 acres and own 11.4 acres per capita while for female hoh's the respective figures are

TABLE 5.24: Per capita farm area owned and cultivated by region, gender of hoh, and degree of involvement in agriculture

• all own-account cultivator households •									
region	male hoh's			female hoh's			all hoh's		
	area owned pcap	area cultv pcap	nm	area owned pcap	area cultv pcap	nf	area owned pcap	area cultv pcap	n
Accra Metro	14.0	7.2	33	2.8	3.6	10	11.3	6.4	43
Mid Coast	16.8	15.7	162	7.9	6.6	71	14.1	13.0	233
West Coast	18.2	8.4	186	6.3	3.5	50	15.7	7.4	236
East Coast	1.5	1.1	113	1.0	.7	47	1.4	1.0	160
East Forest	5.8	5.0	206	5.3	3.0	85	5.5	4.5	271
Mid Forest	18.6	10.1	135	5.4	3.7	77	14.5	7.7	212
West Forest	16.9	14.9	206	11.1	4.7	100	15.0	11.6	306
Upper Forest	8.1	5.2	139	3.8	2.9	120	6.1	4.1	259
Volta Basin	10.7	5.8	209	4.0	2.1	47	8.4	5.1	256
Savannah	4.0	2.3	198	2.4	1.4	10	3.9	2.2	208
all	11.4	7.8	1589	5.9	3.6	597	9.9	6.6	2186
• land-owning households only •									
Accra Metro	23.5	8.5	19	7.0	6.2	4	20.7	8.1	23
Mid Coast	16.8	15.7	162	7.9	6.6	71	14.1	13.0	233
West Coast	19.9	9.1	170	7.3	4.1	43	17.3	8.1	213
East Coast	1.7	1.2	102	1.1	.7	44	1.5	1.1	146
East Forest	10.0	8.1	115	7.8	4.1	44	9.4	7.0	159
Mid Forest	29.7	13.9	89	10.2	4.9	41	23.6	11.1	130
West Forest	22.3	16.0	156	12.4	5.2	90	18.7	12.1	246
Upper Forest	8.1	5.3	124	3.9	2.9	118	8.6	4.1	242
Volta Basin	11.4	6.1	196	4.3	2.3	44	10.1	5.4	240
Savannah	4.0	2.3	198	2.4	1.4	10	3.9	2.2	208
all	13.6	8.5	1333	6.9	3.9	509	11.7	7.3	1842
• own-account cultivator households with over 90% of income from agriculture (including livestock income) •									
region	male hoh's			female hoh's			all hoh's		
	area owned pcap	area cultv pcap	nm	area owned pcap	area cultv pcap	nf	area owned pcap	area cultv pcap	n
Accra Metro	2.8	4.8	4	0.0	5.0	1	2.2	4.9	5
Mid Coast	26.6	29.6	49	8.5	8.1	7	24.3	26.9	56
West Coast	22.2	11.5	54	12.9	6.6	12	20.5	10.6	66
East Coast	2.0	1.6	27	.9	.7	11	1.7	1.4	38
East Forest	6.2	6.3	47	14.3	6.8	10	7.6	6.4	57
Mid Forest	23.8	15.2	46	3.3	3.2	20	17.6	11.6	66
West Forest	21.5	18.3	89	25.5	6.6	22	22.3	16.0	111
Upper Forest	12.0	6.8	59	5.7	4.2	45	9.3	5.7	104
Volta Basin	13.8	7.6	96	12.6	6.5	8	13.7	7.6	104
Savannah	4.0	2.4	128	2.8	1.6	8	4.0	2.4	136
all	14.1	10.4	599	9.5	4.7	144	13.2	8.3	743
• land-owning households only •									
Accra Metro	3.7	5.1	3	0.0	0.0	0	3.7	5.1	3
Mid Coast	26.6	29.6	49	8.5	8.1	7	24.3	26.9	56
West Coast	22.6	11.7	53	12.9	6.6	12	20.8	10.8	65
East Coast	2.1	1.7	26	1.0	.8	10	1.8	1.4	36
East Forest	11.0	10.4	26	20.4	9.5	7	13.0	10.2	33
Mid Forest	32.3	19.8	34	6.6	4.2	10	26.4	16.3	44
West Forest	29.9	22.3	64	26.7	6.9	21	29.1	16.5	85
Upper Forest	14.1	7.2	50	5.8	4.2	44	10.2	5.8	94
Volta Basin	14.4	8.0	92	12.6	6.5	8	14.3	7.8	100
Savannah	4.0	2.4	128	2.8	1.6	8	4.0	2.4	136
all	16.0	11.3	525	10.8	5.1	127	15.0	10.1	652

3.6 and 5.9 acres (the 645 cultivator households which own no land are averaged in as zero values). However, the top panel of 5.24 is not an appropriate comparison across household types, as it includes households with differing degrees of involvement in agriculture. The bottom panel of Table 5.24 controls for this by including only the 37% of the 2186 households for whom agriculture contributes at least 90% of their total income. The patterns change surprisingly little: now mhoh's own 14.1 acres per capita and cultivate 10.4 acres while for female hoh's the figures are 9.5 and 4.7 acres respectively. We still have the problem of controlling for land quality, but this information would be difficult to collect in an already long GLSS questionnaire.

That female headed households have smaller per capita landholdings than male headed households is important: especially in rural societies, landholding is an important determinant of current income streams as well as wealth. Just as current landholding is an important determinant of current living standards, it is important to know how land was acquired, and which individuals own/farm which plots; this information was not available in the GLSS database. Surprisingly perhaps, land sales, typically a distress response, were recorded for only 4 households in the 12 months prior to interview.

• Fertiliser and Hired Labour

The ability of farmers to apply other agricultural inputs such as fertiliser and hired labour (especially at peak harvesting times) is likely to be an important determinant of the ability to respond positively to changing relative prices. The two panels of Table 5.25 show that the incidence of fertiliser use is low among all farm

TABLE 5.25: Hired labour and fertiliser utilisation by household type

• all own-account cultivating households •								
per cap area cultivated quintile	% of hh's using fertiliser	% of hh's hiring adult male lab	their per cap exp on adult male labour	% of hh's hiring adult fem lab	their per cap exp on adult female labour	% of hh's hiring child labour	their per cap exp on child labour	n *
1	12.2	61.9	737.2	3.0	238.2	1.8	157.5	438
2	18.8	73.8	988.9	6.0	1213.4	1.0	880.7	420
3	15.3	68.6	1542.1	7.8	489.3	1.9	385.1	372
4	13.6	66.0	2723.5	8.8	1470.8	.9	506.7	535
5	13.3	72.2	2822.7	12.4	1849.7	3.1	474.2	421
All	14.5	68.3	1821.5	7.8	1220.1	1.7	413.4	2184
• male headed households •								
1	15.7	57.3	758.0	3.5	184.9	1.8	176.0	255
2	20.1	70.8	1088.8	7.8	1353.3	1.1	414.3	284
3	18.5	65.8	1579.6	8.8	520.1	2.4	385.1	291
4	15.1	63.6	3008.8	8.3	1288.6	.7	894.4	423
5	13.5	70.1	3188.2	12.8	1904.5	3.6	409.6	334
all male hoh	18.0	65.6	2091.1	8.4	1283.3	1.8	401.4	1587
• female headed households •								
1	7.2	68.5	712.7	2.2	358.3	2.2	139.0	181
2	15.4	80.2	838.1	2.2	187.3	.7	1400.0	138
3	11.1	78.0	1430.3	3.7	222.2	0.0	.	81
4	8.0	75.0	1817.1	10.7	2068.2	1.8	225.0	112
5	12.6	80.5	1874.4	11.5	578.5	1.2	1250.0	87
all fem hoh	10.6	75.5	1199.3	5.4	1039.1	1.3	457.0	597
• own-account cultivator households with over 90% of income from agriculture (incl. livestock income) •								
per cap area cultivated quintile	% of hh's using fertiliser	% of hh's hiring adult male lab	their per cap exp on adult male labour	% of hh's hiring adult fem lab	their per cap exp on adult female labour	% of hh's hiring adult child lab	their per cap exp on child labour	n
1	11.5	608.9	87.2	185.5	4.9	91.4	3.3	81
2	12.7	867.1	70.3	343.0	9.3	85.7	1.7	118
3	10.1	1318.0	66.2	290.9	8.1	88.9	.7	148
4	14.8	2309.5	86.7	903.4	9.1	225.0	.9	219
5	12.2	2795.2	73.6	1095.8	14.2	397.6	3.6	197
all	13.3	1835.0	67.5	759.1	10.0	260.4	2.0	798
• male headed households •								
1	10.0	660.5	60.0	81.8	5.0	40.0	2.5	40
2	15.5	960.4	63.1	343.0	13.1	85.7	2.4	84
3	10.8	1318.9	63.1	290.9	9.2	88.9	.8	130
4	14.8	2534.2	82.6	915.2	7.1	.	0.0	182
5	12.3	2973.6	72.4	1237.0	13.5	397.6	4.3	163
male hoh	14.0	2012.0	63.9	769.0	10.2	264.5	1.9	649
• female headed households •								
1	14.3	536.0	81.0	333.3	4.8	142.9	4.8	21
2	5.9	702.4	88.2	.	0.0	.	0.0	34
3	5.6	1301.0	88.9	.	0.0	.	0.0	18
4	13.5	1509.0	86.5	881.4	18.9	225.0	5.4	37
5	11.8	2015.9	79.4	578.3	17.7	.	0.0	34
female hoh	10.4	1242.7	83.2	712.4	9.4	248.2	2.7	149

* per capita area cultivated quintiles are unequal
due to internal rounding errors

households (only 16% of male hoh's and 10.6% of female hoh's). These figures don't change much in the bottom panel of the table which again selects out the 37% of the sample who derive more than 90% of their income from farming. The male-female hoh discrepancy in this regard seems particularly acute for the smaller farms (those in quintiles 2 and 3), although the small cell frequencies warrant caution.

Hired labour is employed by most farms in the survey (presumably at harvest time), although the questionnaire doesn't facilitate the conversion of expenditure on hired labour into person days of hired labour input although an attempt could be made with wage information from the community questionnaire. Thus it is difficult to calculate the [household/hired] labour input ratio per farm, let alone per crop. Proceeding nevertheless, Table 5.25 shows that no matter how large the farm is in per capita terms, the % of households hiring male labour seems to reach an upper limit of around 70% in male hoh's and 80% in female hoh's, although for farms that do employ workers, the amount employed is responsive to farm size as judged by the wage bills. The % of farms hiring female labour is more responsive to increasing farm sizes for both the above farm types.

Turning to non-farm self-employment enterprises, hired labour is much less important. As Table 5.26 shows, only 11% of these enterprises use any hired labour at all. Of these enterprises (2185 households report some such activity), 71% of them are associated mainly with women, with 64% of these being based in trading. In general, women-run firms rely more on household labour, and are slightly less itinerant (mobile) than male-run firms, although this is reversed in the trading sector where

TABLE 5.26: Non-farm self employment by gender
of entrepreneur and fixity of location

	% of business owned by hh memb	% of workers from hh	% of firms with some paid labour	N
men				
stationary	96.61	83.32	26.11	383
mobile	93.96	80.74	21.58	241
all	95.59	82.33	24.36	624
women				
stationary	98.94	93.01	7.63	996
mobile	98.22	96.00	2.30	564
all	98.68	94.09	5.71	1560
all				
stationary	98.29	90.33	12.75	1380
mobile	96.95	91.43	8.07	805
all	97.80	90.73	11.03	2185
men				
male hoh	95.65	81.85	24.04	574
female hoh	94.90	87.73	26.00	50
women				
male hoh	98.51	94.82	5.64	958
female hoh	98.94	92.94	5.81	602
all				
male hoh	97.44	89.96	12.53	1532
female hoh	98.63	92.54	7.52	652

[d:\10\10a.sys\10a.t2/5.26]

only 59% of female-run enterprises report a fixed residence compared to 63% for male-run firms.

• Credit

The credit section of the questionnaire is household-based, restricting the gender disaggregation to a comparison of male versus female head of household. Another problem is that the codes for question 16 'why was this money borrowed?' are not sufficiently disaggregated so as to assess whether the loan is to help the household better cope with, or break out of, poverty. However, Table 5.27 does provide a region-gender hoh breakdown of some of the variables in this section of the questionnaire, demonstrating that in most of the 10 regions, compared to their male counterparts, female headed households borrowed smaller sums, less frequently, and also lend out money and goods less frequently, and in smaller amounts. Some questions on *prior credit application success rates* would have been very useful in further describing differential access to credit sources.

5.5.5 Access to Information

Information in the context of the GLSS refers to agricultural extension advice and school attendance.

Surprisingly, only 135 of the 2184 households reporting some farm cultivation activity also reported extension contact in the 12 months prior to interview. Most of these 135 consultations were for cocoa (60) and maize (35). Perhaps less surprising is that only 11 of the 135 (8%) consultations were reported by female headed households, which

TABLE 5.27: Credit activity by region, gender of hoh, and hhdtype

region	credit outstanding-loans in and out				n
	% hh's borrowed money or goods	amount borrowed (unadj. cedis)	% hh's lent money or goods	amount lent (unadj. cedis)	
Accra Metro	41	53132	33	26380	318
Mid Coast	27	15950	27	7722	317
West Coast	38	23744	28	19060	320
East Coast	38	34088	39	10819	304
East Forest	28	14875	34	17280	318
Mid Forest	37	16390	35	11933	313
West Forest	34	11357	29	14488	319
Upper Forest	14	10026	12	7516	314
Volta Basin	34	10808	47	13463	287
Savannah	12	87098	6	23042	317
all	30	25714	29	14973	3130
• male hoh •					
Accra Metro	42	63017	32	22588	243
Mid Coast	31	19314	31	6946	203
West Coast	39	25258	30	20484	235
East Coast	38	27253	38	12284	192
East Forest	25	18850	35	20590	227
Mid Forest	40	18720	36	18037	208
West Forest	34	7714	33	18054	215
Upper Forest	14	13982	15	7298	176
Volta Basin	35	11072	43	13593	227
Savannah	12	91818	8	24088	290
all male hoh	31	28731	29	18088	2218
• female hoh •					
Accra Metro	36	15780	36	37341	75
Mid Coast	21	7263	20	9811	114
West Coast	33	18779	25	14381	85
East Coast	38	45474	41	8498	112
East Forest	27	6141	30	7511	91
Mid Forest	32	10703	34	3499	107
West Forest	32	19528	21	9279	104
Upper Forest	14	5018	8	8036	138
Volta Basin	33	8863	60	13108	80
Savannah	7	2750	7	14150	27
all fem hoh	28	17697	27	12144	913
n,f					
0,0	15	6143	17	8277	155
0,1	25	10953	25	9734	471
0,2	32	51071	28	14093	117
0,3	42	22983	39	30187	38
1,0	28	14951	29	9583	398
1,1	35	24411	30	13888	949
1,2	27	13473	28	11875	233
1,3	29	19778	42	47915	65
2,0	33	16223	28	10445	40
2,1	31	15889	34	20830	191
2,2	29	21876	28	19319	129
2,3	38	37405	32	35203	50

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constitute 27% of all farm households (although not farm output: remember male hoh's have larger farms). A section on the questionnaire probing a little more into the reasons for non-consultation

(e.g. perhaps there are no extension agents in the farmers area) would be useful.

Because attending school is most likely a necessary condition for achievements in literacy and numeracy, (although by no means a sufficient condition) it is important to present a gender-disaggregated analysis of school attendance patterns by age and gender.

Figures 5.1 - 5.4 present such a disaggregation, and show that for almost all age groups, a higher percentage of males have attended school at one time compared to females and this gap becomes progressively larger as we move up the age groups. The proportions of each sex-age group currently attending school display similar patterns. Another indication of gender attitudes towards schooling is provided by the reported figures on whether the parents *intend on returning* current non-attenders to the school system. Above the age of 9 years the 'intend to return' rate diverges significantly in favour of boys: for example at age 13, parents intend that 88% of currently out of school boys will return to formal education while the figure for girls is only 54%. At age 16 the corresponding figures are 46 and 28%. However, once in school, there seems to be no gender difference in the number of hours spent actually attending classes (7-day recall), approximately 14-17 across most age and sex groups. Unfortunately, we have no information on course subjects other than the groupings: commercial, vocational, technical, and out-of-school technical.

Fig 5.1: School attendance rates by age and gender

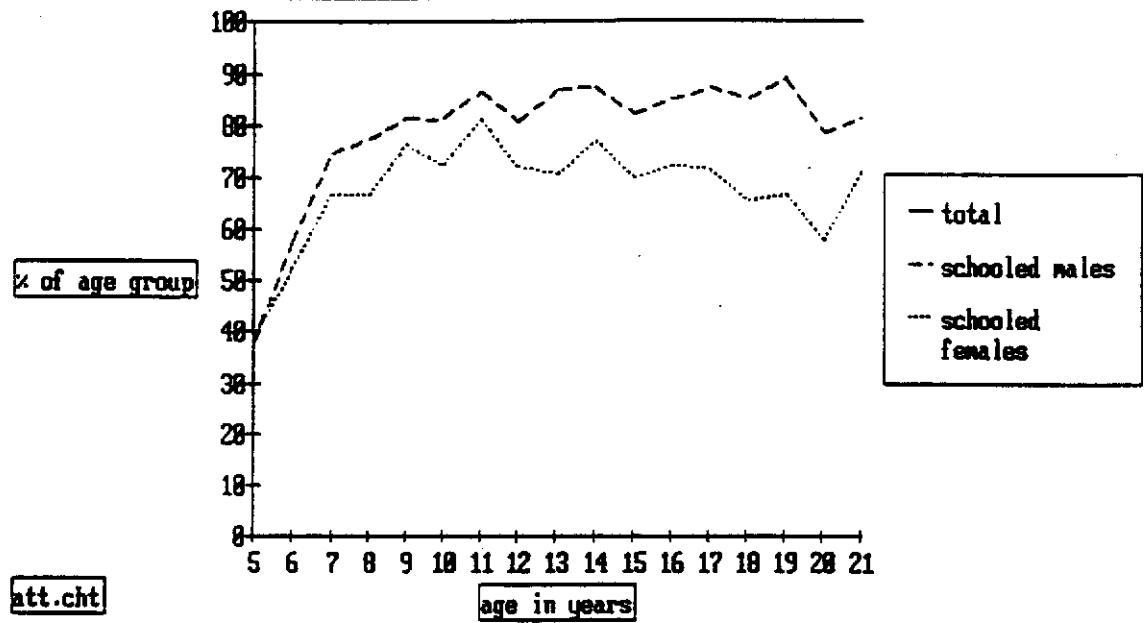


Fig 5.2: Current school attendance by age and gender

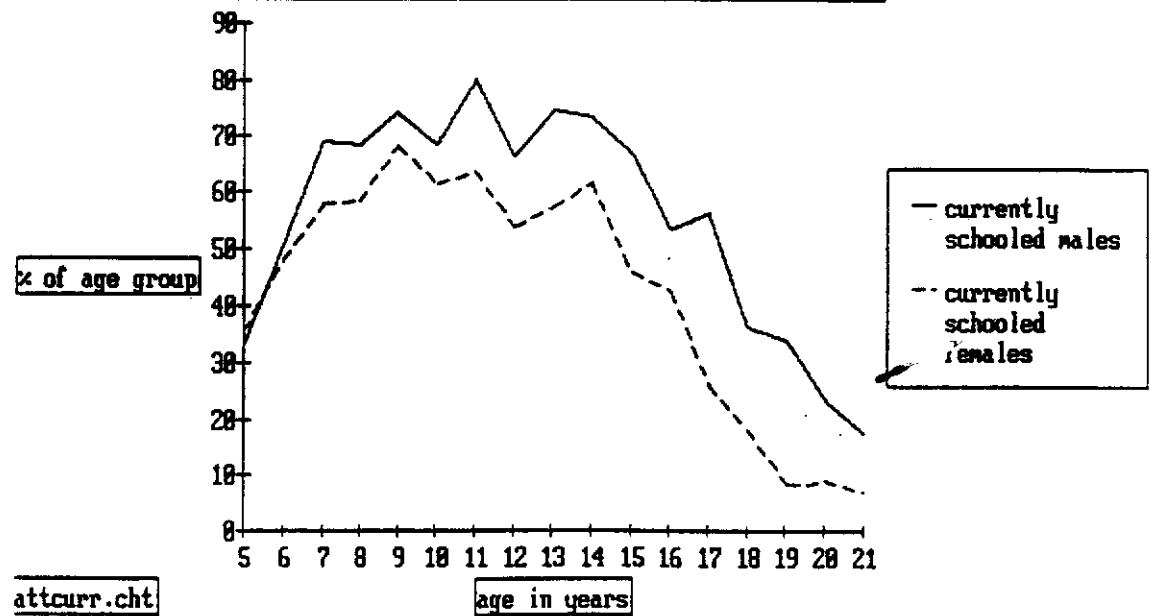


Fig 5.3: Male school attendance: current and past

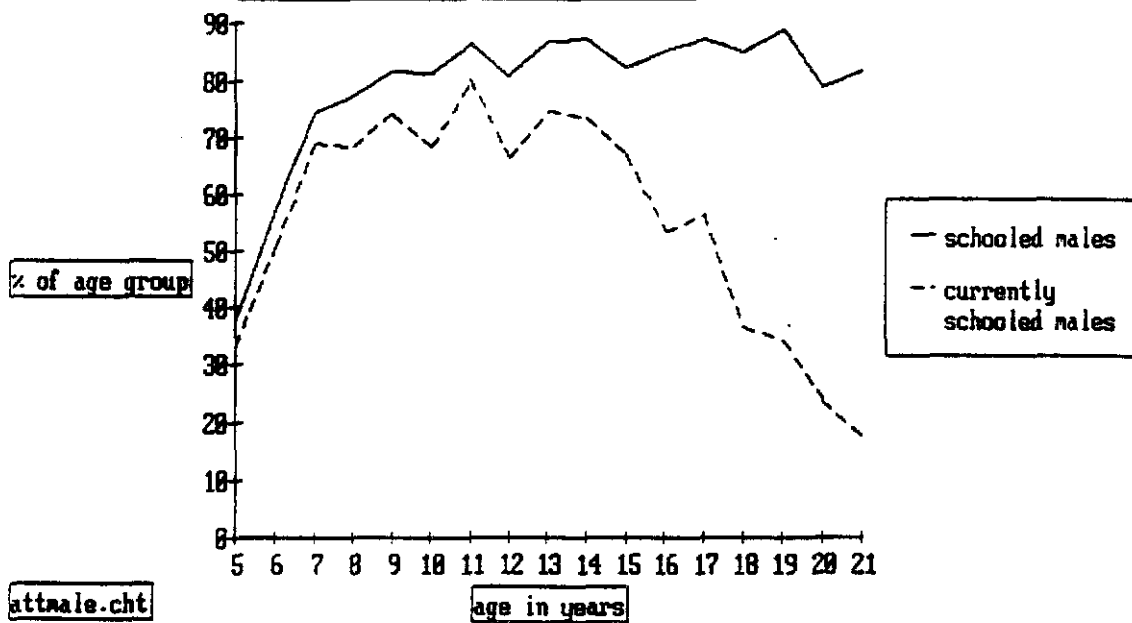
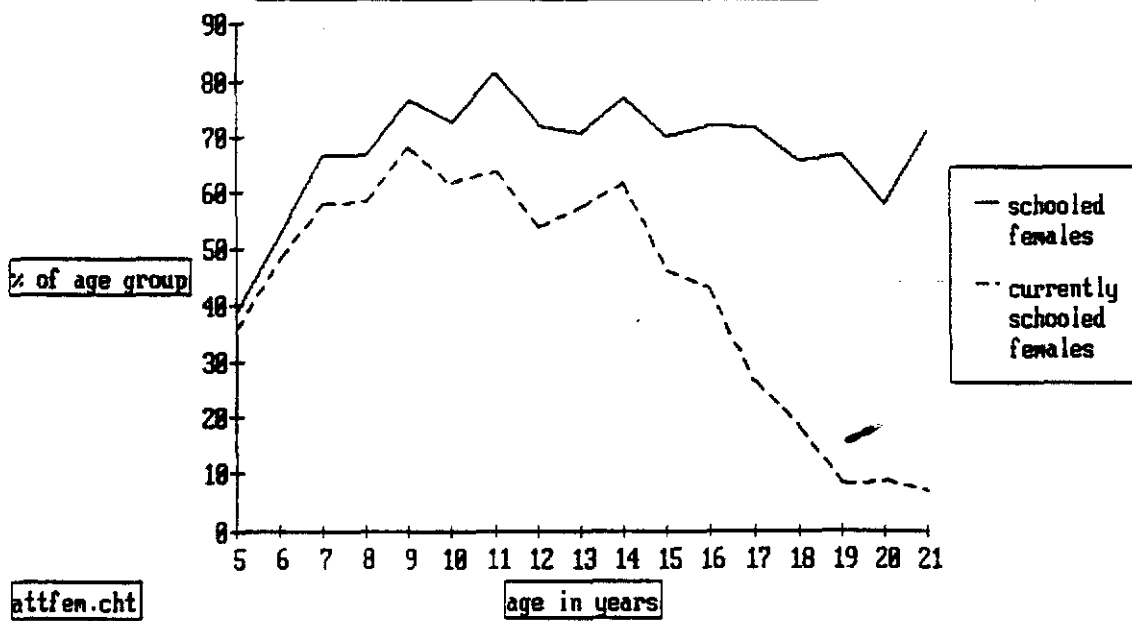


Fig 5.4: Female school attendance: current and past



Evidence from the education expenses section of the questionnaire also sheds some light on institutional attitudes towards males and females in higher education. For current students, reliant solely on household members and scholarships for their school expenses (82% of those currently in education, all ages) there are many more males in higher education (those over age 19, currently in school) - 120 males to 33 females, with none of the females having been awarded scholarships, whereas the average annual value of scholarships awarded to 21 year old males is 3333 cedis (n = 21).

5.6 Outcomes

It is rather awkward to talk in terms of outcomes, since all outcomes are, in turn, inputs into some other outcome. For instance, child nutritional status is an input into (1) lifetime earnings, and (2) if the child is female and bears children, her child's nutritional status. Nevertheless, this section will focus on **achievements** rather than the **means** to that achievement.

5.6.1 Anthropometric Indicators

For many reasons, preschooler nutritional status, (proxied here by heights and weights), will be a more sensitive indicator of current living standards than adult measures. Infants are more vulnerable than adults to health input deprivation, and they are unable to adapt to deprivation in any way other than linear growth retardation or 'stunting'.¹⁰

10 an analysis of adult anthropometric measurements for the GLSS data has been undertaken by Alderman (1989), and the differences found between adult males and females in this regard were small.

For children less than 5 years of age (< 60 months) z-scores¹¹ for height for age (ZHA) and weight for length (ZWL) were calculated using NCHS standards. Broadly speaking, ZHA is more of a proxy for long run nutritional status or 'stunting' (i.e. incorporates nutritional history of child during and after pregnancy), while ZWL is more a measure of short run health deprivation or 'wasting'.

Results presented in Table 5.28 confirm that there is no significant difference in our chosen anthropometric outcomes between boys and girls less than 60 months in age. A comparison of z-scores of children from male and female headed households reveals that children from the latter are slightly more stunted and slightly less wasted than their counterparts in male headed households, but neither result is strong. The two way disaggregation does not show any dramatic differences either: for instance, boys within female headed households have similar z-scores to boys within male headed households.

A regional/gender-of-head-of-household breakdown presented in Table 5.29 shows that stunting (ZHA) is worse for children in female-headed households in 8 out of 10 regions, with the remaining 2 regions having very small cell sizes. In general then, even within regions, children in female headed households are at a slight disadvantage in the long-run. It is interesting to note that the regional poverty patterns identified in section 5.2.2 are reflected for male hoh's by both ZHA and ZWL, (especially for Accra), but not for female hoh's.

¹¹ deviation of height or weight measurement from standard at median of healthy US population, divided by the standard deviation of that standard measurement in the healthy US population.

TABLE 5.29: Z-scores for preschoolers by region, gender of hoh

Region	male headed hh			female headed hh			all households		
	ZHA	ZWL	N	ZHA	ZWL	N	ZHA	ZWL	N
Accra Metro	-.72	-.14	118	-1.10	-.33	42	-.82	-.19	158
Mid Coast	-1.33	-.63	160	-1.63	-.39	69	-1.42	-.58	229
West Coast	-1.12	-.51	198	-1.21	-.51	64	-1.14	-.51	282
East Coast	-1.04	-.51	139	-1.19	-.48	58	-1.09	-.50	195
East Forest	-1.05	-.38	174	-1.34	-.37	58	-1.12	-.38	230
Mid Forest	-1.48	-.38	129	-1.64	-.48	85	-1.53	-.42	214
West Forest	-1.59	-.65	210	-1.66	-.35	80	-1.61	-.57	290
Upper Forest	-1.08	-.69	141	-1.30	-.55	106	-1.18	-.63	247
Volta Basin	-1.35	-.50	218	-.94	-.68	39	-1.28	-.52	255
Savannah	-1.48	-.71	245	-.71	-1.02	20	-1.43	-.73	285
grtr Accra	-.71	-.12	118	-1.05	-.23	40	-.80	-.15	158
other urban	-1.01	-.48	388	-1.04	-.42	173	-1.02	-.45	541
rural	-1.38	-.59	1242	-1.53	-.53	404	-1.42	-.58	1848
ALL	-1.26	-.53	1731	-1.36	-.48	617	-1.28	-.52	2348

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TABLE 5.28: Z-scores for preschoolers (less than 60 months old)
by gender and gender of hoh

household type	males 0<5 yrs			females 0<5 yrs			all 0<5 yrs		
	ZHA	ZWL	n	ZHA	ZWL	n	ZHA	ZWL	n
male hoh	-1.25	-.50	843	-1.26	-.58	888	-1.26	-.53	1731
fen hoh	-1.38	-.49	318	-1.34	-.47	299	-1.36	-.48	617
all hoh	-1.29	-.50	1161	-1.28	-.54	1187	-1.28	-.52	2348

[d:\16\child.sys\16.t4/5.13]

These results need to be disaggregated by age in order to provide a clearer picture of preschooler anthropometry. In the top panel of Table 5.30 precisely such a disaggregation is performed with the familiar observed decline in ZHA by age group. Bearing in mind that the cell frequencies are not large, it seems that although children in female headed households get a better head-start in life, their nutritional status declines more rapidly than male head of household children. Examination of z-scores by household type (where cell frequencies > 40) in the bottom panel of Table 5.30 did not show any association with the dependency ratios (hhdtype) of section 5.2. However, ignoring small cell frequencies, an intriguing results emerges for female headed households. In fhoh's, as the number of females in the 15-60 range rises (for a constant number of men) and time burdens are reduced (see section 5.5.2), ZHA improves substantially. Clearly we need to control for factors such as age, but cell sizes become impossible. Nevertheless, the result requires further detailed analysis, because, as it stands, it suggests that there might be a time/ZHA tradeoff.

5.6.2 Literacy and Numeracy

Literacy (the ability to read a newspaper and/or write a letter) and numeracy rates by age group for males and females between the ages 5 and 20 are plotted in Figures 5.5 - 5.9. Amongst the skills listed, and for both sexes, numeracy is most prevalent, followed by reading, and then by writing ability. Around the age of 11 the gender-specific rates begin to diverge, favouring boys across all three skill areas.

Does this boy-girl discrepancy persist by gender of household head?

Table 5.31 looks at skill rates by gender, age group, and gender of

TABLE 5.30: Z-scores for preschoolers by age, gender, hhdtype and gender of hoh

age (yrs)	boys			girls			all preschoolers		
	ZHA	ZWL	N	ZHA	ZWL	N	ZHA	ZWL	N
• male headed households •									
0 < 1	-.42	-.39	156	-.21	-.43	185	-.31	-.41	341
1 < 2	-1.05	-1.01	138	-1.41	-1.02	147	-1.23	-1.01	285
2 < 3	-1.32	-.51	224	-1.55	-.58	182	-1.42	-.54	406
3 < 4	-1.57	-.36	170	-1.67	-.45	190	-1.63	-.41	360
4 < 5	-1.86	-.32	151	-1.50	-.40	179	-1.66	-.36	330
• female headed households •									
0 < 1	-.24	-.41	84	-.09	-.33	58	-.17	-.37	122
1 < 2	-1.38	-.96	44	-1.14	-1.02	56	-1.25	-1.00	100
2 < 3	-1.51	-.41	79	-1.80	-.33	54	-1.63	-.38	133
3 < 4	-1.75	-.38	63	-1.97	-.39	65	-1.86	-.39	128
4 < 5	-1.98	-.41	67	-1.58	-.33	65	-1.78	-.37	132
• all households •									
0 < 1	-.37	-.40	220	-.18	-.40	243	-.27	-.40	463
1 < 2	-1.13	-1.00	182	-1.33	-1.02	203	-1.24	-1.01	385
2 < 3	-1.37	-.48	303	-1.60	-.53	236	-1.47	-.50	539
3 < 4	-1.62	-.37	233	-1.75	-.43	255	-1.69	-.40	488
4 < 5	-1.90	-.35	218	-1.52	-.36	244	-1.70	-.36	462

PRESCHOOLERS (<5 yrs) IN:

hh type	male headed hh			female headed hh			all households		
n,f	ZHA	ZWL	N	ZHA	ZWL	N	ZHA	ZWL	N
0,0	-.70	-.70	5	-2.05	-.62	10	-1.60	-.64	15
0,1	-1.23	-.20	32	-1.39	-.53	307	-1.37	-.50	339
0,2	-1.58	-.39	16	-1.31	-.45	81	-1.35	-.44	97
0,3	-.12	-1.17	7	-.64	-.41	20	-.51	-.61	27
1,0	-1.09	-.52	10	-1.20	-.37	4	-1.12	-.48	14
1,1	-1.19	-.55	844	-1.62	-.60	39	-1.21	-.55	883
1,2	-1.43	-.62	227	-1.44	-.26	40	-1.43	-.57	267
1,3	-1.34	-.43	83	-.86	-.06	19	-1.25	-.36	102
2,0				-1.03	-.07	2	-1.03	-.07	2
2,1	-1.45	-.64	130	-1.20	-.43	13	-1.43	-.62	143
2,2	-1.07	-.43	104	-1.10	-.43	23	-1.07	-.43	127
2,3	-1.48	-.28	51	-2.05	-.54	11	-1.58	-.33	62
3,0	3.18	-1.06	1	-2.04	-.18	2	-.30	-.47	3
3,1	-1.52	-.50	40	-1.70	-.51	3	-1.53	-.50	43
3,2	-1.17	-.34	37	-.79	-.41	5	-1.13	-.34	42
3,3	-1.52	-.15	14	-2.13	-.73	2	-1.60	-.23	16

[d:\16\child.sys\16.t5/5.15]

Fig 5.5: Male educational achievement by age

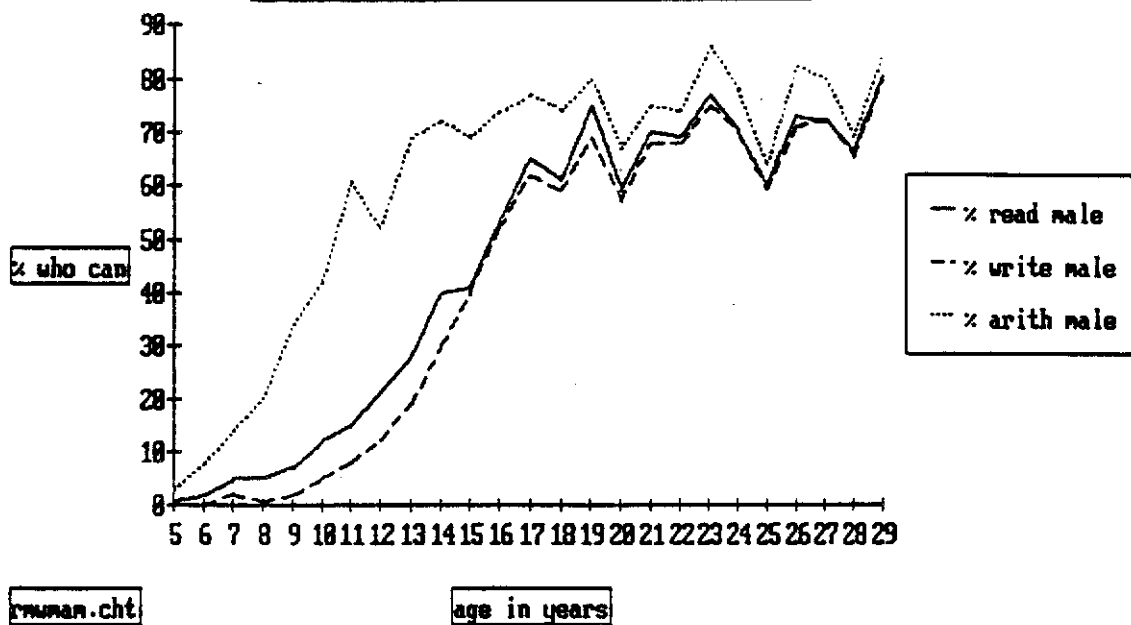


Fig 5.6: Female educational achievement by age

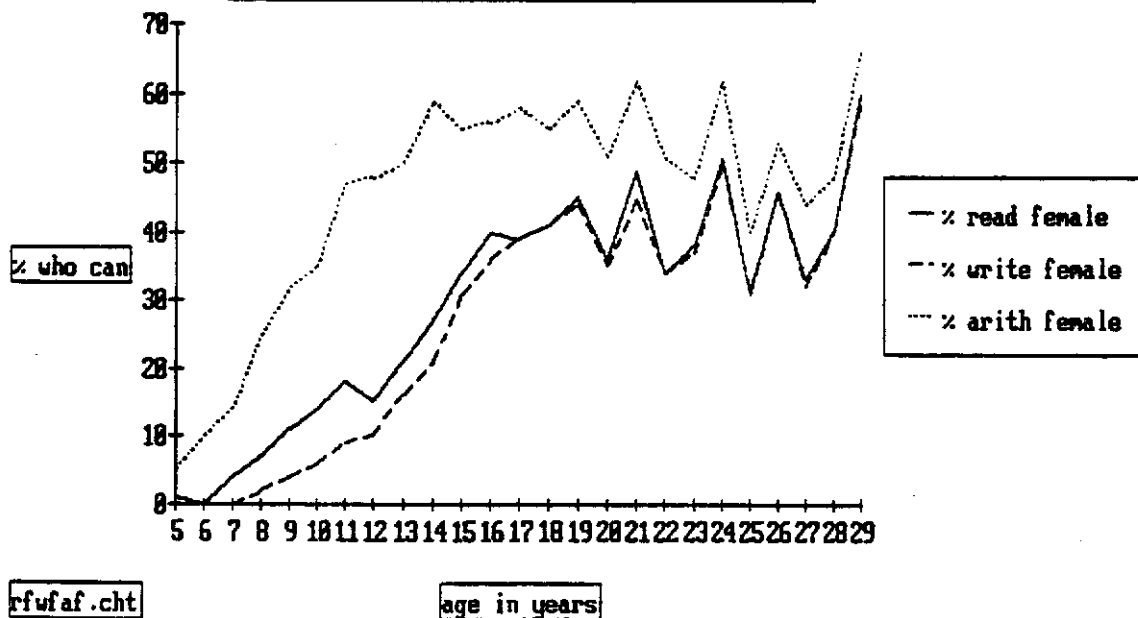


Fig 5.7: Reading ability by gender by age

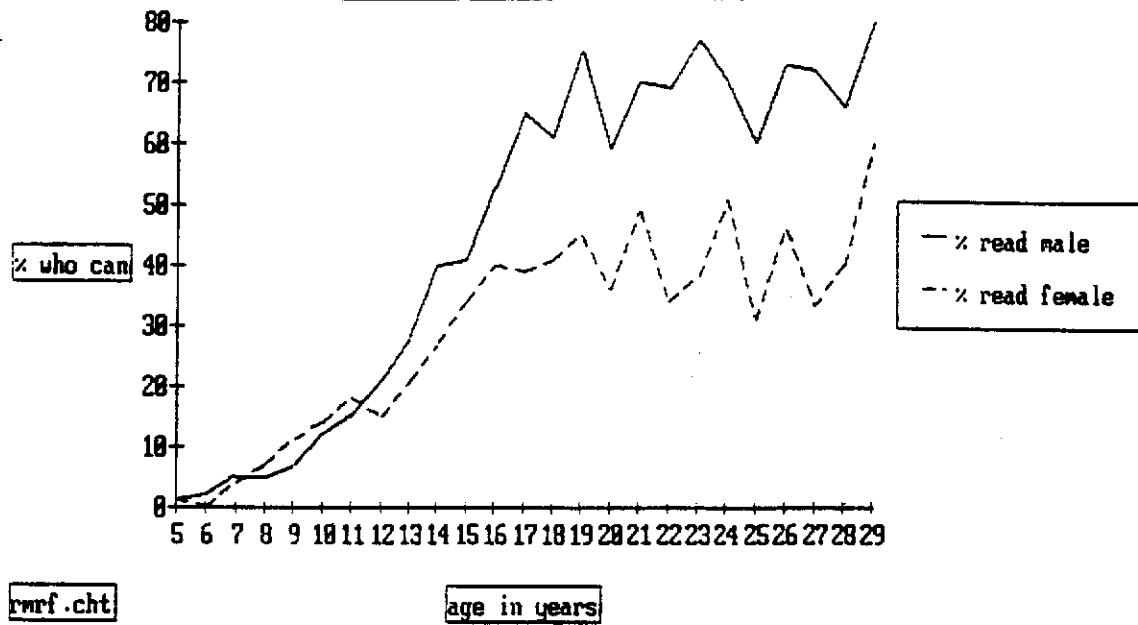


Fig 5.8: Writing ability by gender by age



Fig 5.9: Numeracy by gender by age

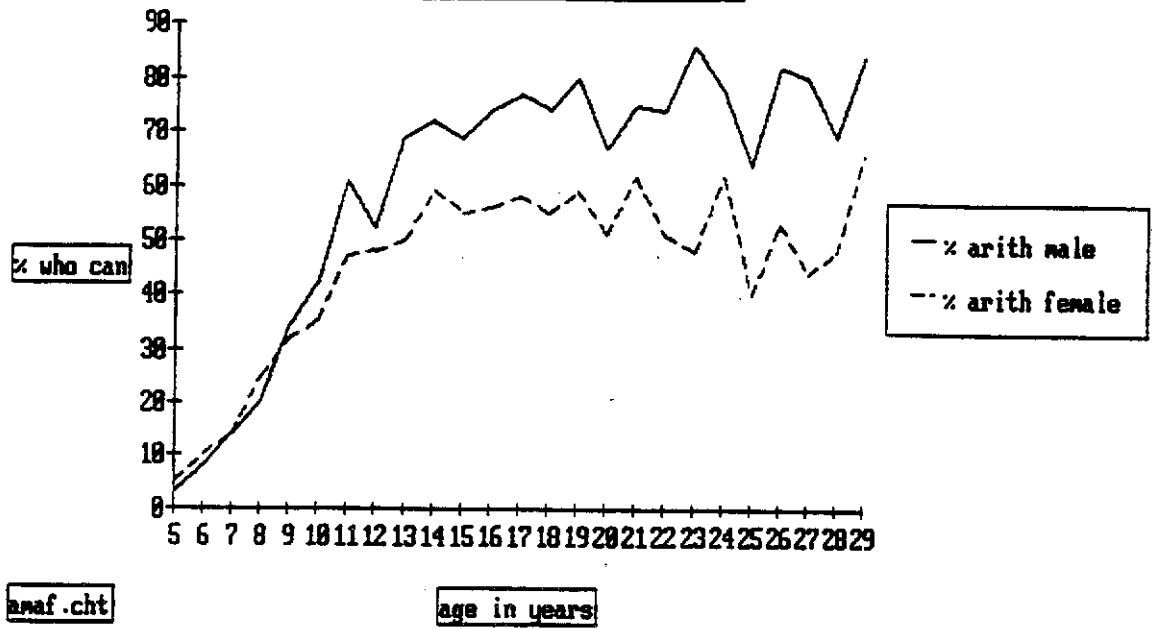


Fig 5.18: Reading rates by selected regions, Ghana

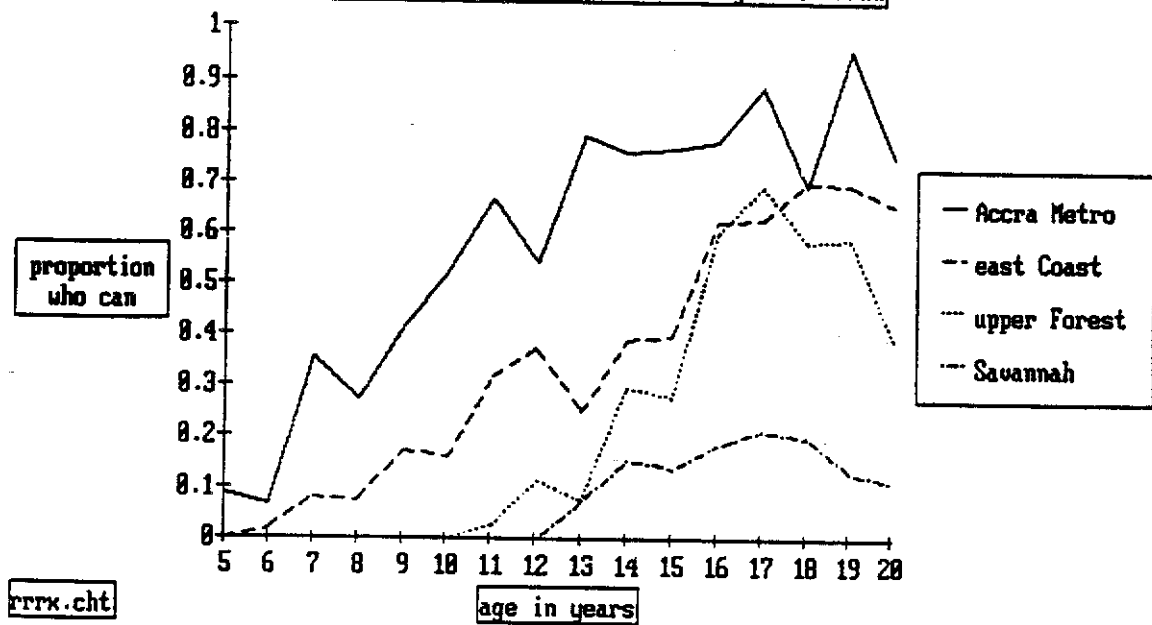


TABLE 5.31: Literacy and numeracy by age group,
gender, and gender of hoh

hh type	boys 5-10 yrs				girls 5-10 yrs				all 5-10 yrs			
	%read	%write	%arith	nb	%read	%write	%arith	nb	%read	%wrt	%arth	n
male hoh	5.5	1.5	19.3	1113	6.2	2.0	18.1	1010	5.8	1.7	18.7	2123
fem hoh	4.0	1.6	20.2	377	5.1	1.7	23.0	408	4.6	1.7	21.7	785
all	5.1	1.5	19.5	1490	5.9	1.9	19.5	1418	5.5	1.7	19.5	2908

hh type	boys 11-20 yrs				girls 11-20 yrs				all 11-20 yrs			
	%read	%write	%arith	nb	%read	%write	%arith	nb	%read	%wrt	%arth	n
male hoh	41.6	35.9	63.9	1273	29.9	25.8	50.4	1100	36.2	31.2	57.6	2373
fem hoh	45.0	40.8	78.6	476	31.0	27.4	58.9	526	37.6	33.7	68.3	1002
all	42.5	37.2	67.9	1749	30.3	26.3	53.1	1626	36.6	32.0	60.8	3375

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household head. For the 5-10 age group, girls are slightly more advanced than boys, and children of both sexes from mhoh's perform better in reading but worse in arithmetic than children from fhoh's. Overall however, there are no large differences for this age group. This is not so for the 11-20 age group. Firstly, boys perform significantly better than girls in all skills. Secondly, children from fhoh's have better skills than their mhoh counterparts. Thirdly, the boy-girl discrepancy is widened for fhoh's. However, there are a number of confounding factors involved here, and a detailed regression analysis is necessary in order to isolate gender as a determinant of achievement. Two of the main confounding factors are age and region. For instance, the groups in Table 5.31 cover a number of ages, and the fhoh group may contain a higher proportion of older groups. Also, the regional dimension, so important in the poverty analyses, has not been examined. Table 5.32 and Figure 5.10 present educational attainment data by age, region, and gender of household head. Accra has by far the highest reading rates of any survey region (although the rate in the Volta Basin is high), with Savannah having by far the lowest rate. Once region is accounted for, gender of hoh shows no systematic effect on reading rates of the selected 11-15 age group.

5.6.3 Morbidity

As well as being an indicator of poverty, the general level of morbidity is an important input into the health production function. Table 5.33 presents some measures from the health section of the questionnaire, disaggregated by sex, region and age. During the 4 weeks prior to the survey, the average self-reported days suffering from illness was 7.7 for males and 7.5 for women, averaged across

TABLE 5.32: Literacy by age group, gender, region, and gender of hoh

Literacy (%) of boys and girls (aged 11-15) by region and gender of household head										
all households										
region	boys		girls		male: female ratio	male hoh		fem hoh		male: female hoh ratio
	% read	n	% read	n		% read	n	% read	n	
Accra Metro	74.36	78	64.94	77	1.15	70.08	127	67.86	28	1.03
Mid Coast	11.36	88	10.71	56	1.06	10.47	86	12.07	58	.87
West Coast	50.00	108	19.59	97	2.55	36.69	139	33.33	66	1.10
East Coast	33.73	83	35.80	81	.94	30.56	108	42.86	56	.71
East Forest	17.48	103	17.82	101	.98	14.29	147	26.32	57	.54
Mid Forest	26.32	95	15.38	104	1.71	22.14	131	17.85	68	1.25
West Forest	14.55	110	3.54	113	4.11	8.96	134	8.99	89	1.00
Upper Forest	18.58	113	12.63	95	1.47	16.96	112	14.58	96	1.16
Volta Basin	50.00	110	44.66	103	1.12	44.19	172	60.98	41	.72
Savannah	7.63	131	5.06	79	1.51	6.32	190	10.00	20	.63

Literacy (proportion) of boys and girls (aged 11-15) by region and gender of household head								
region	male head of household				female head of household			
	boys		girls		boys		girls	
	pr read	n	pr read	n	pr read	n	pr read	n
Accra Metro	.75	64	.65	63	.71	14	.64	14
Mid Coast	.14	51	.06	35	.08	37	.19	21
West Coast	.52	77	.18	62	.45	31	.23	35
East Coast	.27	56	.35	52	.48	27	.38	29
East Forest	.14	83	.14	64	.30	20	.24	37
Mid Forest	.26	62	.19	69	.27	33	.09	35
West Forest	.15	67	.03	67	.14	43	.04	46
Upper Forest	.23	64	.08	48	.12	49	.17	47
Volta Basin	.47	93	.41	79	.65	17	.58	24
Savannah	.07	123	.04	67	.13	8	.08	12

[c:\3\3i.inc\3i.t4/5.17]

TABLE 5.33: Self-reported morbidity incidence and health service utilisation by age, gender, and gender of hoh, and region

self-reported morbidity incidence and service utilisation by age and gender										
males						females				
region	m days ill /month	% m cons- ulted	m hrs consult	m % ill inactive	mn	f days ill /month	% f cons- ulted	f hrs consult	f % ill inactive	fn
Accra	8.0	58.1	.7	42.2	848	7.3	60.4	.6	44.7	632
M.Coast	7.2	44.4	1.3	66.6	640	6.9	47.6	.6	65.5	688
W.Coast	8.9	56.2	.6	52.6	724	9.5	62.7	.5	53.1	751
E.Coast	6.6	41.9	.9	48.2	688	7.2	41.4	1.0	47.4	685
E.Forst	7.6	51.4	.6	56.3	741	7.5	55.2	.6	60.1	801
M.Forst	7.2	44.1	1.0	47.3	671	6.9	48.1	1.2	45.4	731
W.Forst	7.1	50.1	.8	60.2	813	6.8	50.4	.7	65.3	915
U.Forst	7.4	43.6	.7	48.7	676	7.7	46.7	.8	48.2	735
Volta B	7.7	31.4	1.0	34.2	853	7.4	35.9	.8	33.4	881
Savanna	9.9	41.5	1.7	54.4	941	9.4	44.2	.8	57.8	864
ALL	7.7	46.3	.9	50.7	7384	7.5	49.1	.8	52.1	7687

age group	m days ill /month	% m cons- ulted	m hrs consult	m % ill inactive	mn	f days ill /month	% f cons- ulted	f hrs consult	f % ill inactive	fn
0-6	7.2	52.5	.9	52.1	1851	6.9	57.4	.8	51.9	1841
7-14	6.2	40.9	.6	52.8	1749	5.8	41.0	.5	53.4	1840
15-21	6.6	40.5	.7	53.4	1060	6.2	46.2	.7	56.1	986
22-45	7.9	46.5	.9	47.8	1799	7.7	54.2	.8	50.6	2178
46-60	9.3	41.5	.9	47.8	584	9.3	40.3	.9	50.9	690
> 61	12.8	42.4	1.7	49.8	341	12.2	31.7	.6	52.2	351

m hoh	7.9	44.3	1.0	49.9	5994	7.3	45.4	.8	51.6	5279
f hoh	6.8	45.1	.6	53.9	1390	7.8	47.1	.7	52.9	2408
ALL	7.7	46.3	.9	50.7	7384	7.5	49.1	.8	52.1	7687

[d:\4\y04.sys\4.t2/5.18]

individuals of all ages. During approximately 50 % of these days, the illness was too severe to allow the individual to carry out their usual activities, and just under half of the respondents who reported illness sought treatment consultation, with the average time taken to go to the consultation being approximately .85 of one hour. For all Ghana, none of these variables exhibit large differences at the mean across gender of respondent. The average female is ill .2 of a day less than the average male, has a higher (by 2.8%) treatment consultation incidence, but is inactive for a higher proportion (1.4%) of the time ill. These data have several interpretations: (i) women are getting ill less often than men, but when they do, it is a more serious complaint (i.e. more likely that consultation will be sought and that they will be inactive), or (ii) women are reported as ill less frequently than men at a given symptom level (iii) women are more likely than men to receive consultation and are encouraged to take extra days off at a given symptom level. For interpretation (i) to hold, effects (ii) and (iii) must be weak.

Disaggregation by age does not shed much light on the above data. A U-shaped pattern for days ill/month by age is demonstrated, the female curve lying slightly below the male curve for all age groups. No significant differences were found between individuals by the gender of their household head. Problems with self-reported morbidity data in general are well known. The main problem being that the tolerance of a departure of individual health status from the individuals own definition of his/her norm is dependent on income and education, as is the definition of the norm itself. Consequently self-reported morbidity is often positively correlated with income as is the case for the GLSS (see Boateng et. al. 1989). Clearly these problems could severely

jeopardize regression analyses, let alone the simple two-way breakdowns presented here.

6. CONCLUSIONS AND POLICY IMPLICATIONS

Before proceeding to draw policy implications, it must be stressed that not all of the conclusions derived from the two, three, and four-way table results will survive multi-variate analysis. With this caveat in mind we can proceed to a summary of results obtained in the previous section.

6.1 Conclusions of Empirical Analysis

Female headed households contain disproportionate numbers of children, women, and the elderly, and therefore have higher dependency rates. This becomes even clearer when the *de facto* nature of the female's position as household head is taken into account: whatever factors lead to the disproportionate number of households in which adult men (as opposed to adult women) are scarce, also ensure that dependents (children and the elderly) remain the woman's responsibility.

In addition, there is an association between households in which women constitute the majority of the adult membership, and moderate poverty. The evidence on the hardcore poor suggests that the poorest of the poor are to be found within male hoh's, although some sensitivity analyses have to be undertaken with regard to the position of the poverty line before the P_{α} results can be viewed with more robustness. The patterns of poverty evaluated in three different ways (P_{α} , food budget shares, and consumer durable possession), all confirmed the inferior position of female hoh's *vis a vis* male hoh's, even within regions (only attempted for food budget shares and durables).

In terms of primary occupational location, over half of the adults in the agricultural labour force are female. The frequency of secondary occupations is approximately equal across gender. Male intergenerational occupational mobility, as measured by parent-responder comparisons, is higher than that of women. However, contrasting evidence from tree-cropping patterns suggests that female headed households play an important role in cocoa cultivation, and have been able to plant young crops in recent times.

Compared to male hoh's, female hoh's depend less on wage income, more on non-farm self employment, less on agriculture, and more on remittances. Expenditure patterns reflect this. Female hoh's are poorer, yet purchase a higher proportion of their food in the market. These patterns hold within most survey regions.

Female hoh's have primary responsibility in all spheres of household decision making, whereas in male hoh's the spouse is more likely to be responsible for food purchasing and any non-farm business activity. Time burdens are much heavier for women than men across all age groups, number of jobs and type of household. Compared to men, women spend slightly less time in production activities outside the home - approximately 4 hours less overall - but spend 15 or so hours more on production activities inside the home. The outside the home trend is reversed for female hoh's, and consequently the greatest difference in male-female time burdens occurs in female hoh's. A higher proportion of female hoh's use wood for cooking compared to male hoh's, yet a higher proportion also purchase wood rather than collect it: evidence of a binding time constraint.

For households deriving most of their income from agriculture, female hoh farms are smaller and less inclined to use fertiliser, even controlling for farm size. Credit activity is also lower for female hoh's. Access to information is relatively poor for females and female hoh's. Extension contacts are low overall, and especially low for female hoh's. School attendance rates are lower for girls than for boys both in terms of current and past attendance, with the threshold age of divergence being around 9 years.

There are no major differences between males and females across anthropometric indicators for preschoolers, although children of both sexes have poorer long-run z-scores (ZHA) in female hoh's than male hoh's. Furthermore, this result holds in 8 out of 10 regions. The regional patterns of poverty identified with the expenditure-based indicators are reflected by the z-scores in the male hoh's, but not in the female hoh's. Educational achievement (literacy, numeracy) is much superior for males compared to females, although no clear pattern emerges when this result is, in addition, broken down by the gender of the hoh. Self-reported morbidity patterns are similar across gender and gender of hoh, but for a number of reasons argued above this result should be interpreted with extreme caution.

In conclusion, the consistency of patterns across initial conditions, occupational patterns, access to resources, time burdens, and basic needs outcomes, indicates that **gender** is an important dimension along which to examine the distributional consequences of economic adjustment in Ghana. Furthermore, the persistence of many of the patterns within regions, suggests that a regionally based effort to mitigate the social costs of adjustment which is gender-indifferent, will not fully address

the inability of households with high dependency ratios, time burdens, and levels of poverty, to respond to the challenges of adjustment. Therefore it would seem desirable to incorporate a gender dimension into any mitigation effort.

6.2 Policy Implications

The Ghanaian Government's Programme of Actions to Mitigate the Social Costs of Adjustment (PAMSCAD) includes projects designed to generate employment, facilitate the delivery of basic needs, improve access to education and credit, and rehabilitate community infrastructure. Undoubtably these projects have the potential to reduce the probability of women being both a brake on, and overburdened by, economic adjustment. Whether the projects will realise this potential is a matter for detailed case-by-case evaluation, but one way of lowering the odds is to raise the budgetary profile of PAMSCAD components specifically designated or targetted towards women. For instance, the cost estimate attached to the existing PAMSCAD initiative to 'Enhance the Economic Opportunities for Women in Development' (Government of Ghana, 1987) is relatively small compared to other project initiatives. Our empirical results suggest a high marginal social benefit to additional funding for these types of project.

Policy priority ranking as determined by the data seem to correspond well to Government and donor rankings. Specifically, the strongest results from the empirical section are (i) the differential male-female access to, and achievements in education and (ii) heavy female time burdens.

First, it is clear that illiteracy has a very high opportunity cost. For instance, a small relaxation of this constraint would at least allow an individual to provide the signature required to secure credit. In general then, schooling changes (in terms of quantity, quality, and subjects) will be important in changing attitudes towards women's roles. This is clearly accepted by senior Government officials responsible for Ghanaian education: women are being encouraged to take agriculture/science/business-based subjects, and, what one senior official termed, 'lifeskills' orientated curricula. Teacher-training will thus be an important factor in the drive to reorientate women's roles, although funding details are still under discussion.

Second, the empirical results suggest that income generation schemes, popular with PAMSCAD and the National Council on Women and Development (NCWD), will be most effective when they are *time or energy saving*. Currently, there are several, but not sufficient of these female income-generation schemes in Ghana, and their psychology is interesting: they promote the immediate attractions of enhanced income generation, but then try to 'piggy-back' longer term objectives (e.g. improved weaning foods preparation by mothers). Income generation is crucial to confidence generation, but as we have argued, schemes that operate with the existence of the heavy female time burdens as a *given*, are most likely to succeed.

An example of this type of project involves women pito brewers in the Greater Accra region. Traditional production techniques are time consuming, and a 'low-tech' innovation, developed at the Department of Nutrition, University of Ghana (Sefa-Dedeh 1989) has been successfully introduced, reducing processing time by 30%. The motivation behind this

work is clearly to raise productivity, but more importantly, to relax the time constraint so that women are not forced to allocate their time too thinly. Only then can women respond to the processes of change embodied in Ghana's economic adjustment.

**APPENDIX 1: Resource People Contacted on Ghana Mission
(April 1989)**

- Mrs. E. Ardayfio-Schandorf, Geography Department, U. of Ghana
- Dr. O. Boateng, Director, Ghana Statistical Service
- Dr. Tuwm-Baah, Ghana Statistical Service
- Philomenah Mensah, Amoo-Appau, and Moises Williams, GLSS Secretariat
- Professor K. Ewusi, ISSER, U. of Ghana
- Dr. F. Issaka, Deputy Secretary, Local Government
- Mrs. C. Johnson, December 31st. Women's Movement
- Ms. N. Latiunen, Programme Officer, UNDP
- Ms. S. Pehu-Voima, Programme Officer, UNICEF
- Mrs. Sutherland-Addy, Deputy Secretary, Higher Education and Culture
- Dr. S. Sefa-Dedeh, Nutrition Department, U. of Ghana
- Mrs. M. Tackie, National Council for Women in Development (NCWD)
- Professor P. Twumasi, Dean of Social Studies, U. of Ghana
- Mrs. Yeboah, Deputy Secretary, Education

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