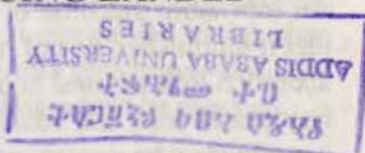


PEASANT ENDOWMENTS AND THE REDISTRIBUTIVE FUNCTIONS OF INFORMAL RURAL LAND MARKETS: THE CASE OF CEREAL PRODUCING LANDED PEASANTS

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ABSTRACT: *The different features and functions of informal land markets vis-à-vis the relative endowment positions of households in each stratum have been analysed. Informal rural land markets are found to have redistributed land, labour, output and generally direct production-led entitlement as well as human capital formation towards the richer and away from the poorer households. Oxen ownership was found to be the determinant factor that engendered the mechanism of transfer of land use rights, which in turn would determine the redistributive process. Thus, as long as strong link persists between 'ox-ownership' and 'farming', oxen-deficient households would continue to transfer their land use rights irrespective of its shortage to meet their household subsistence requirements. The results highlight that, in a structural setting where such a massive and significant deficiency in endowment of key factors prevails, liberalisation of rural land markets might result in unintended social outcomes for the poorer groups unless there is some compensation mechanism through other means (e.g., non-farm employment).*

INTRODUCTION

For over two and a half decades now, land redistribution practice in rural Ethiopia has been basically resorted to as an administrative choice of dealing with shortages. Yet, clearly this practice cannot meet the insatiable demand for agricultural land that is triggered primarily, but not exclusively, by the sustained increase in agricultural workforce. It does not address the shortage as such but attempts to provide security in terms of making sure that farmers would have access to agricultural land. This social security

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function, however, may not necessarily deliver, or may even deny, the necessary economic impetus for both increased agricultural production and improvement of the lot of the majority of the agricultural producers.

An inevitable outcome of executing such a practice on a repeated scale is that it diminishes size of holdings over time. Official statistics indicate that about 92.26% of rural households operate on holdings whose sizes are two hectares or less; this constitutes 72% of total cropped area. The number of households who operate on holdings whose size is less than or equal to one hectare alone would constitute 72.1% of the total. Still, 46.7% of the total households command holdings whose sizes were 0.5 hectare or less (CSA, 1993). The national average per household holding size is estimated to be about 0.8 hectares with remarkable inter-regional variations.

This process has not been accompanied with productivity increases because the practice of frequent land redistribution, which was meant to serve primarily a social security function, has in fact contravened with the economic security function with its ultimate disincentive effects on agricultural investment. As a combined outcome of these (i.e., emergence of minuscule plots and low level of agricultural productivity) a large number of peasant households do not produce enough to meet their minimum consumption requirements (see Berhanu, 1991; Tesfaye, 1989; Omitti, 1994) let alone producing voluntary marketable surplus.

The legal imperative for such a '*rationing*' practice is provided by the state ownership of agricultural land, which not only prohibits the development of private land ownership but also resists the functioning of formal land markets. The justification given is that, because the extent of rural poverty and deprivation is so massive and deep, rural land privatisation and liberalisation of its markets would compel peasants to sell their land to few wealthy individuals, leaving themselves landless and without any means of livelihood (TGE, 1991). Therefore, the land policy is conceived by the state as preventive of massive peasant displacement and as providing a fallback position and safety-net instrument for the majority of poor peasants.

Hence, on the one hand; there seems to exist an apprehension that a bona fide liberalisation of rural land markets runs the risk of alienating the majority of the poorer peasant households in a structural fashion, with equity concerns occupying the center. On the other hand, there is an undercurrent that tends to dismiss such a concern as unfounded, in fact,

blaming the poor agricultural performance squarely on the very land policy that the government has adopted; and instead puts its faith on liberalising the land markets if any future prospect of growth is to be projected; here precedence is given to efficiency rather than equity. However, each claim is based on some historical conjectures or theoretical generalities rather than contemporary strong empirical evidences. Part of the problem is that only fragmented information is available; hence, more data would be required.

In rural Ethiopia, despite the fact that the development of formal land markets has been discouraged, several forms of informal land markets grafted themselves onto the state administered land redistribution practices, playing different functions with the effect that at least two major parallel forms of land transfer mechanisms are coexisting in rural areas: *the state rationing* on the one hand, and that of *informal rural markets* on the other.

This paper aims to identify the major features of the informal rural land markets, explore some of their redistributive functions between the resource-rich farmers on the one hand and the resource-poor ones on the other, and investigate the factors that would determine these redistributions. Survey data, collected from four peasant associations in Ada (of East Shoa), and Hetosa, Limmu & Bilbilo *Woredas* (of Arssi) during 1996/97 production year, are used. First, some of the conceptual issues surrounding informal land markets are briefly touched upon, which is followed by a discussion of local perceptions as a basis for stratifying peasant households. Then, the main features as well as the redistributive functions of the informal land markets are outlined. Finally, a section on concluding remarks closes the paper.

INFORMAL LAND MARKETS AS CONTRACTS: FORMS AND CHOICES

Informal land markets often entail temporary transfer of land use rights. The relevant literature addresses these as contracts between a landlord and a peasant-worker in the context of a choice between several options: fixed-rent contract, sharecropping contract and a wage contract. Such contracts may emerge irrespective of existence or absence of a functioning formal land markets; however, the very fact of missing rural factor markets makes it absolutely necessary for such contracts to thrive.

Of these three options, sharecropping is the most commonly and widely discussed in the literature. Its existence has been justified as a mechanism for risk-sharing (missing insurance markets), cost sharing (wealth constraints) and minimising problems of adverse selection and moral hazard i.e., by reducing transaction costs, providing incentives, and facilitating screening (see Cheung, 1969; Newbery and Stiglitz, 1979; Stiglitz, 1986; Binswanger & Rosenzweig, 1984; Bliss and Stern, 1982). Eswarn and Kotwal (1985) consider the role of sharecropping in terms of its use in overcoming market imperfections other than that of land. In particular, this is presented as an outcome of capacity differences between the parties to the contract, i.e., the landlord and the tenant, in acquiring and effectively providing two important factors in production, namely management and supervision.

In a fixed-wage contract the landlord decides on production, undertakes supervision and management, and claims the total output less wage for the labourer. In a fixed-rent contract it is the tenant who makes production decisions, performs supervision and management, and claims the total output less the rent for the landlord. In the sharecropping contract the partners jointly decide on production, contribute factors of supervision and management according to their relative efficiency, and share output. If it is to be conceived that the landlord and the tenant are respectively more efficient in management and at supervision and neither of these could be acquired in the market for fee, then sharecropping may be a mechanism to effectively gain access to these two factors (Sadoulet and de Janvry, 1995: 264-266; Ellis, 1988: 146).

In a Principal-Agent framework involving unequal relationship, that is the principal as dominant landlord while the agent as a dominated tenant-worker, the principal chooses the contract to offer in full knowledge of the optimising behaviour of the agent, under the constraint that the contract be at least as attractive to the agent's alternative opportunities for employing his resources (Bell, 1989). In this case, the landlord has the last word in setting the terms of the contract implying that the choice involves comparing the maximum levels of income to be achieved under the three alternative types of contract after which the most profitable contract would be chosen. If the landlord believes that he/she may achieve efficiency in supervision fairly easily, then he/she may opt for a wage-contract. On the other hand, if efficiency in management could be easily achieved by the

tenant, then fixed-rent contract would be chosen. In situations where both management and supervision are demanding then sharecropping contract would be chosen. Hence the specific type of contract to be chosen is a function of the factors that determine efficiencies in management and supervision by respective partners. For instance, in an activity where production is governed more by established tradition and little by technological change, fixed-rent seems to be a perceivable choice.

The issue of equity is directly linked to the relative bargaining power of the two agents in the transaction process irrespective of the framework or model to be chosen; i.e., whether the principal-agent framework or bargaining models are chosen, the efficiency gains would be shared with a rule that fundamentally depends on the relative bargaining power of the two agents. In the principal-agent framework, the a priori premise that establishes the landlord's dominance over the terms of the contract ensures the unequal division of the gains from the contract. As long as there are possibilities for one partner to dominate the transaction process, bargaining models would not also give a better result. Therefore, ultimately what determines the division of gains, hence equity, from such contracts would be the relative bargaining power of the partners. Often tied transactions are used to further enhance the relative bargaining positions of landlords so that the share of the landlord is maximised at the expense of the share of tenants (Bhaduri, 1973). Clearly the reality is much more complex than provided by such an assumption that depicts landlords as dominant partners and tenants as dominated ones.

In the Ethiopian context, research into land issues has often fallen short of adequately addressing the roles and functions of the informal land markets in its wider perspectives; and this is surprising in view of the arguments and counter-arguments surrounding liberalisation of land markets. The limited studies that are available attempt to describe what seems to prevail in certain localized areas without much relating to the wider theoretical debates or linking with broader macroeconomic contexts (see for e.g., Yohannes, 1994; Gavian and Amare, 1996; Tesfaye et al., 2000).

The attempt by Bereket and Croppenstedt (1995) to chart out the theoretical framework with which to view the Ethiopian scenario could perhaps be an exception despite its tendency to subscribe to the all too easily uttered efficiency concerns. Bereket and Croppenstedt (1995: 337) argue that sharecropping has increased social efficiency by redistributing land use,

'equalizing' landholdings of households, and adjusting farmland of households to their factor endowments. They identified factor endowments as determining farmers' decision to lease out or in (Ibid., 1995: 348), and suggest that sharecropping is used as a means of concentrating land.

Gavian and Ehui (1996) have attempted to systematically measure the relative efficiencies of alternative land tenure contracts in Arssi to reach the conclusion that 'land tenure does not constrain productivity at the current level of development'; they also suggested that the informal tenure contracts should be formalized (Gavian and Ehui, 1996: 123). However, their efficiency comparison considered farmlands of different tenure forms rather than between the human agents who cultivated these lands, which if investigated could have led to dissimilar conclusions. Part of the explanation may lie in the lack of data; but it has also become a common mistake to resort to the methodological assumption of peasants as 'sack of potatoes' by taking for granted the homogeneity assumption.

Others (e.g., Dejene and Teferi, 1995: 329) tend to make rather strong statements, without providing any empirical evidence, that 'existing tenure system has no mechanism to make land relatively accessible to more efficient vis-à-vis the less efficient ones. The inquisitiveness to link different forms of tenure arrangements with efficiency is not matched with a coherent definition and measurement of what is simply referred to as 'efficiency'. This is without raising the more fundamental methodological requisites that would capture such evaluations. Clearly, the existence of informal rural land markets has created some mechanisms by which land is becoming more accessible to some groups rather than others though this is limited in scale and scope. That the number of landless households is growing, and that this is differentiated both in gender and generation is coming out boldly without requiring any fine-tuning. Dejene and Teferi (1995: 329-330) are quite aware of this tendency that female-headed households as well as newly established male-headed households do not have any formal mechanism of access to agricultural land.

It is not the purpose of this paper to test the efficiency functions of or differences between the different types of informal rural land markets. Rather, it is to describe the processes and mechanisms that entice some or coerce others to enter into these markets, and map out the different implications of such contracts for different actors. At the outset, though, it must be stressed that the picture that is to be portrayed in rural Ethiopia

tends to deviate from, if not turn by the head, the conventional models that represent landlords as dominants or with excess supply of land, and tenants as dominated. To be exact, the landlords are generally poorer households while tenants are the resourceful ones. What this would mean is that resourceful farmers tend to absorb more land through renting in land, while the poorer ones are temporary transferring their use rights by renting it out. And, this transaction takes place in the context of general scarcity of cultivated land that failed to enable peasants to support their family and improve their situation. Hence, sufficient care needs to be exercised in attempting to superimpose such models onto the Ethiopian realities. Identification and characterisation of the different actors in the informal land markets would be a useful step because it would help shed some light on their implications on both efficiency and equity considerations.

LOCAL PERCEPTIONS AS A BASIS FOR STRATIFYING PEASANT HOUSEHOLDS

The issue of peasant stratification would invite a lot of questions including differences in what, who possesses the knowledge about the perceived differences, etc. Relative positions of households and persons differ with respect to a combination of tangible (e.g., asset ownership, income levels) and non-tangible factors (social or political standing, prestige, and influence). So, the question becomes not only that of how could these be captured but also who possesses the better knowledge about such differences.

The conventional wisdom has it that survey data on some important quantifiable variables such as the distribution pattern of assets and incomes could serve as a basis for stratification in which case the set of stratifying variables are determined by the researcher; the assumption being that such variables would best capture the inter-household and/or inter-personal differences in relative positions and power. However, such variables would capture at best the tangible aspects of the differences and tend to underestimate the interdependence of both aspects and particularly the role played by the non-tangible factors in the process of differentiation. For example, because the concept of agrarian differentiation in the context of capitalist development is predicated upon the inevitable fission of the 'peasant' category into classes of capitalist farmers and agricultural wage workers, the issue has mostly been associated with the identification of

why that household should or should not be included in a particular stratum. For example, some would consider ownership of a pair of oxen only as sufficient enough a criterion to qualify a household in a middle stratum; but pursuant to discussions about the relative capacity of the household to win livelihood (e.g., lack of seeds, or inability to feed family members and therefore dependence on others) then agreements were finally reached. Thus, for example, the rich were found to be those who have significant extra-farm employment and income such as speculation and trade in coffee, pepper, grains, livestock, retail shops in consumer items, etc., and/or own small scale enterprises such as grain mills. Obviously, these could hardly be captured by placing much faith on such issues as can be provided by farm management survey data only.

A total of 1304 peasant households were classified into three strata. Overall, the households considered 'rich' are few in number i.e., less than 5% of the total. On the other hand, about 47% of the households were found to be poor according to the perceptions of local people. In terms of PA, the poorer households would constitute 58% in ACH, 50% in WL, 46% in LCH and 37% in LG. Also one could note that the relatively more accessible and commercialised areas (WL & ACH) tend to have larger poor concentration ratio than the less commercialised ones (LCH & LG). This might also reflect the variability of local perceptions of relative status and of poverty from place to place. A total of 172 households were drawn as sample units; a minimum target of 10% was set to determine sample size to be randomly drawn from each stratum. However, a larger proportion was given to the richer strata as compared to the middle and the poorer ones. This is important given the small number of richer households and the expected larger intrastratum variation. Accordingly, the sample size for the rich, middle and poor strata of households was 30, 81 and 61 respectively.

Table 1: Total Landed Households and Sample Size

PA	LANDED HOUSEHOLDS	SAMPLE SIZE
Wachu Lencha (WL)	422	44
Arerti Chellebba (ACH)	220	43
Lemu Chemerri (LCH)	334	51
Lemu Guna (LG)	328	34
Total	1304	172

PREVALENT PATTERN OF HOLDINGS AND MAJOR FEATURES OF THE INFORMAL LAND MARKETS

Prevalent Patterns of Holdings

The study areas are rather familiar in many respects. They possess a good agricultural potential and are physically the most accessible; historically, they have been hosting a series of 'rural development' ventures, and are characterised by a relatively high degree of intensification of agricultural production. Peasants in the area are considered to be more market oriented than their counterparts elsewhere in the country as depicted by their highest marketed surplus. Cropping patterns do vary from place to place owing to agro-ecological and socio-economic factors, but peasants in Ada tend to concentrate on teff production while those in Chilalo mainly produce wheat or barely (Table 2).

Table 2: Median Distribution of Percentage Acreage Share of Barley, Teff and Wheat in Total Cultivated Land by PA and Year

PA	BARLEY		TEFF		WHEAT	
	1995	1996	1995	1996	1995	1996
ACH	0.00	0.00	56.61	61.93	8.26	14.56
LCH	62.50	65.79	0.00	0.00	12.50	13.00
LG	33.11	38.02	2.17	0.00	45.23	36.36
WL	12.75	13.00	13.23	13.17	52.55	55.05

As could be seen, high degree of concentration in teff, barley and wheat is evident in ACH (Ada), LCH and WL (both in Chilalo) respectively; and this is irrespective of years. Together these three crops accounted, in 1996, for over 83 % of total cultivated area in LG and WL and for 90 % for LCH as well as 79% for ACH.

Increasing population pressure on arable land has perhaps engendered such a relatively high tendency of concentration in the production of few crops. Clearly, one of the outcomes of the 1975 land reform has been that of swelling of the rural population as land claims were primarily based on residence with the effect that average holdings became smaller over time. These led not only to concentration of production, but also in the decline of livestock holdings as pasture and fallow lands were increasingly put under plow. In the study areas, the available land is perceived to be generally insufficient by the vast majority of households. There are a considerable number of new land applicants in all the study areas, and officials of peasant association are rather apprehensive about how these could be accommodated. The general pattern of distribution of allocated land per household is shown in Table (3)¹ and Annex (1).

Table 3: Mean Land Distribution Pattern and Subsistence Units (Allocated and Total Cultivated) by Strata in hectares (1996)

Summary	WL			ACH			LCH			LG		
	Rich (10)	Middle (19)	Poor (15)	Rich (10)	Middle (16)	Poor (17)	Rich (5)	Middle (28)	Poor (18)	Rich (5)	Middle (18)	Poor (11)
Allocated land per Household	1.98	1.66	1.55	2.51	1.78	1.50	1.58	1.69	1.73	2.74	1.86	1.30
Total cultivated land Per HH	2.73	2.02	0.98	4.09	2.27	0.98	3.60	2.33	1.49	3.24	2.39	0.73
Subsistence units (AE)	6.02	4.50	4.13	7.17	5.01	4.07	7.13	5.61	4.92	6.53	6.47	3.57
Allocated land per AE	0.39	0.41	0.41	0.40	0.41	0.46	0.25	0.35	0.40	0.43	0.30	0.47
Total Cultivated land Per AE	0.56	0.59	0.29	0.57	0.52	0.35	0.54	0.46	0.34	0.50	0.39	0.22

Figures in parenthesis indicate sample sizes

With the exception of LCH,² the prevalent pattern of allocated landholding distribution per household seems to have favoured the rich and disfavoured the poor. Part of the explanation for such a discrepancy would lie in the inter-strata differences in demographic characteristics since land redistribution is primarily based on family size.

Adult Equivalent (AE) measures were computed to standardise differences in subsistence requirements due to different household compositions. Household members of different age categories were converted into units of AE taking into account their respective calorie requirements. Weights of 0.5, 0.75, 0.9 and 1.0 were respectively given to ages up to 5, 6-10, 10-13, and those 14 and above.³ It could be seen that mean levels of AE are larger for higher stratum and lower for the poorer groups. F-statistic would suggest that inter-strata mean differences in AE are significant⁴ for ACH and LG. The distribution pattern of AE by strata corroborates the observation that it is characterised by larger AE for the richer stratum and smallest for the poor. Therefore, the observed inter-strata differences in per-household allocated landholding distribution could have come from differences in AE distribution.

When per AE considerations are brought into the picture, inter-household differences in land allocated per AE tend to disappear suggesting that redistribution practices have apparently taken care of inter-household variations in family sizes. F-statistic suggests that inter-strata mean differences in per AE allocated land are not statistically significant suggesting that on the whole a somewhat egalitarian pattern of land distribution has been prevalent.

Types and Features of Informal Rural Land Markets

The existence of informal land markets would alter the distribution pattern of holdings as usufructuary rights are transferred between households. In the study areas, active informal land markets have developed in their multi-dimensional forms. The most important ones include fixed-rentals and sharecropping. The former mainly involves a fixed renting of a piece of land for an agreed number of agricultural seasons. The rent varies with the quality of the land, its location, scarcity, the time or season at which the contract takes place (cheaper during kremt and expensive in bega),⁵ the extent to which the person who would lease out land is at distress thus in

need of immediate cash, etc. Overtime, the rate has risen quite dramatically. This is understandable given the high growth rate of the landless and the land-hungry households whose single most important course to accessing land is through resorting to such land markets.

Sharecropping, on the other hand, concerns a mutual arrangement by landowner and tenant in which land could be worked and inputs contributed either jointly or by the tenant only, but in which both could lay claims on the output. Like rental rate, the share varies with a lot of factors including the terms of arrangement, quality of land, its scarcity, the extent to which the landowner is desperately needy, etc. The share of the landowner can range from one-third to one-half. For example, within the same PA, notwithstanding similarity in land quality and other factors, it was found that while those in the middle stratum who sharecropped part of their land could receive one-half of the crops, the share of the poor was only one-third. Where sharecropping is practised, high demand for land have raised the share of the landowners; i.e., former arrangements in which all inputs could be contributed and output equally shared have gradually left their place to an equal sharing of output without the landowner having to contribute any input except land.

Forms of fixed-renting and sharecropping contracts as well as their rate tend to vary by region as well as strata in the same region. The data illustrate 62% of the sampled households as participants in such contracts. Of these, 58 (54.7%) cash-rented, 37 (34.9%) sharecropped and 11 (10.4%) combined both. In terms of distribution by peasant association, 21 participated in ACH of which 11 (52.4%) cash-rented while the rest 10 (47.6%) sharecropped. In LCH of the 37 participants 25 (65.6%) cash-rented, 7 (18.9%) sharecropped while 5 (13.5%) combined. In WL of the 26 participants 18 (69.2%) cash rented, 6 (23.1%) sharecropped while 2 (7.69%) combined. This shows that fixed-renting rather than sharecropping has been the dominant form of informal land markets in all but LG, where of the 22 participants 14 (63.6%) sharecropped while 4 (18.2%) each either cash-rented or combined.

Their distribution by strata indicates that, of the 23 participants in the higher strata, 15 (65.2%) cash-rented, 6 (26.1%) sharecropped while the rest 2 (8.7%) combined. By contrast, of the 37 participants in the poorest strata 16 (43.2%) cash-rented, 17 (46%) sharecropped while the rest 4 (10.8%) combined. Of the 46 participants in the middle strata 27 (58.7%) cash-

rented, 14 (30.4%) sharecropped while the rest 5 (10.9%) combined. The degree of participation by strata shows that it was 77% for rich, 61% for the poor and 57% for the middle suggesting that most of the peasant households in all strata have been actively participating in the informal rural land markets. When this participation is viewed in terms of actors, virtually all of the households in the richer strata contracted in; all of the households in the poorer households contracted out; and over 95% of households in the middle stratum contracted in. Such an observation might reveal the scarcity of farmland vis-à-vis its supply since the latter is dependent on the extent to which the poorer households could make land available on the market. The data also show that generally tenants tend to have preferred fixed-rental contract rather than sharecropping. The introduction of these informal land markets into the analysis completely alters the overall scenario.

REDISTRIBUTIVE FUNCTIONS OF THE INFORMAL RURAL LAND MARKETS

Informal land markets apparently redistribute land among different strata of households. There is a clear pattern in all the PAs that as the size of total cultivated land increases for the richer stratum it declines for the poorer stratum. From Table (3) it can be discerned that the poor households transferred a remarkable share of their allocated land while the other strata added up to their initial capacities quite significantly. Analysis of variance would suggest that in all cases inter-household mean differences in total actually cultivated land have turned statistically significant. In some cases the minimum total actually cultivated land within the poor stratum could even be reduced to zero, suggesting that in extreme cases some of the poor have completely relinquished their access to land albeit temporarily. The situation is not very different whether the figure under consideration is per household or per person; there is a consistent trend that informal land markets have redistributed cultivated land towards the richer and away from the poorer households.

Even though taking only two consecutive years cannot adequately capture the trend of land mobility (concentration and dispossession) over time, a comparison of total cultivated land for the years 1995 and 1996 would show that more land had been on the market in 1995 than in 1996. It can be noticed that the rich and middle stratum accessed to lesser amount of land

while the poor regained in 1996. This should be compelling to search for a possible explanation for such a state of affairs, particularly as to what occurred during the preceding few years. At the national level, in 1993/94, agricultural production declined by 5.3% in volume terms (a record cut since the drought in 1984/85) mainly caused by drought, erratic rainfall, and pest infestation.⁶ Grain prices skyrocketed even in these regions; and the spill over effects of these years have clear impacts on the poor. Crises are times for asset deprivation of the poor and enrichment of the better ones.

This situation would also have impacts on other processes. For those households who managed to expand their cultivated land through the operation of these informal land markets, it would improve the land/person ratio and raise average productivity of their family labour. But it would also shape the behaviour of the informal labour market in terms of making the labour of the poor redundant hence readily available for employment by the richer households often at low wage rates, hence playing a labour redistributing function.

Available labour holding was derived from household size and composition by converting the latter into a standardised measure of Labour Equivalent (LE) that would account for differences in household compositions (age and sex). The respective weights are given as follows: children below the ages of 10 years are disregarded; those between 10 and 13 are given 0.2; those between 14 and 16 are accorded 0.5 (if male) or 0.4 (if female); those between 17 and 50 are given 1.0 (if male) or 0.8 (if female); and 0.5 was given to those aged above 50 years.⁷

From Table (4a) it could be seen that mean values of LE tend to be larger for the rich and smaller for the poor. Richer households are characterised by endowment of larger labour units as compared to the poorer ones. A comparative distribution of LE per unit of allocated land and total cultivated land would show that the latter tends to reduce the land pressure for the richer and middle stratum thus lowering LE per unit of cultivated land while quite the opposite force is at work for the poor (Table 4b). The circumstance has to be seen in view of the significantly larger figures of LE and AE per unit of initial landholding for the rich relative to the poor. This has clear implications on return per person measured either by marginal or average products, which in the final analysis determines livelihood. In the context of general land scarcity and labour abundance, loss of land renders

labour superfluous especially in a situation where it cannot be absorbed in any meaningful manner either within agriculture or non-agricultural sectors.

Table 4a: Distribution Pattern of Labour Holding (Mean LE)

LE per unit of :	WL			ACH			LCH			LG		
	Rich (10)	Middle (19)	Poor (15)	Rich (10)	Middle (16)	Poor (17)	Rich (5)	Middle (28)	Poor (18)	Rich (5)	Middle (18)	Poor (11)
Household	4.45	3.13	3.03	5.85	3.30	2.93	5.75	3.95	3.75	4.75	4.11	2.50
Allocated land	2.29	1.96	1.93	2.44	1.90	1.94	3.63	2.43	2.15	1.77	2.36	2.81
Total cultivated land	1.59	1.64	6.71	1.44	1.62	4.43	1.69	1.76	3.55	1.47	1.99	6.47

Figures in parenthesis indicate sample sizes

Table 4b: Relative Change in Labour Holding due to Land Markets (Mean LE)

LE per unit of Cultivated Land	WL			ACH			LCH			LG		
	Rich (10)	Middle (19)	Poor (15)	Rich (10)	Middle (16)	Poor (17)	Rich (5)	Middle (28)	Poor (18)	Rich (5)	Middle (18)	Poor (11)
Initial pattern	2.29	1.96	1.93	2.44	1.90	1.94	3.63	2.43	2.15	1.77	2.36	2.81
With land market	1.59	1.64	6.71	1.44	1.62	4.43	1.69	1.76	3.55	1.47	1.99	6.17
Change (LE)	-0.70	-0.32	4.78	-1.00	-0.28	2.49	-1.94	-0.67	1.40	-0.30	-0.37	3.36
Change (%)	-30.6	-16.3	247.7	-41.0	-14.7	128.4	-53.4	-27.6	65.1	-17.0	-15.7	119.6

Figures in parenthesis indicate sample sizes

Agricultural labour could be employed in three different ways in the study areas: *daily labour*, *piece-meal contract labour* and *long-term contract labour*. The first two are characterised by demand that fluctuates from season to season following the rhythm of agricultural operations. Wage rates do not significantly vary by region as they do by task and type of contract. In all the study areas the rate was about five birr per day, and fifty birr for a contractual agreement involving five up to six days of work per person. The rate of payment for longer-term employment is more complex; it includes cash whose amount varies with age, the specific tasks expected

of the employee, access to land called *guluma* which is to be cultivated by the oxen of the employer and whose output accrues to the labourer, etc.

Table (4b) shows the swiftness with which labour is becoming redundant for the poor households and the relative sluggishness of the demand creation for it in the other strata with the operation of informal land markets. Obviously, this would create a necessary condition for labour to work for the richer households. Thus, children of the poor are often absorbed as cattle keepers and/or farmers often at low wage rates (birr 60 - 100 per annum) while female members of such a family usually take up work for food in richer households. In other cases, for example in WL, the resort to temporary migration to nearby towns has been palliative measures.

The same process would help release part of the family labour of the rich and makes it available for human capital formation and/or running small family businesses in the nearby towns. It is no accident that most of the children of the richer peasants would go to school (Table 5) while those of the poor are hired as cattle keepers-cum-farmers by the richer ones.

Table 5: School Enrolment of Children with Age of Six or More by PA and Strata.

PA	Rich			Middle			Poor		
	Total	Enrolled	%	Total	Enrolled	%	Total	Enrolled	%
ACH	28	19	67.9	38	10	26.3	33	4	12.1
LCH	20	15	75.0	85	31	36.5	65	19	29.2
LG	18	6	33.3	64	9	14.1	18	0	0.0
WL	37	32	86.5	48	42	87.5	34	24	70.6

Because informal land markets are interlocked with markets for other factors and products, they have a function of credit channelling in terms of facilitating the screening process as well as reducing the likelihood of bad debt. This could be made possible because loan applicants who would 'volunteer' to rent their land out to a potential lender are the most likely acceptable ones. The institution of informal land markets would facilitate the collateral arrangements in terms of bringing the land of the borrower under the full control of the lender for at least the duration of the loan. Such

an arrangement would allow the richer households to exercise a high degree of control over the exchange processes (rates and terms of payment, etc.) of not only land transactions but also that of other factor and product markets.

One of the most important reasons as to why the poor have to rent out their land, therefore for the existence of informal land markets, is lack of a pair of oxen. Nearly 37% of all households in the sample as well as 87% of the poor have either no ox at all or have only one. Those without oxen alone would constitute about 23% of all households in the sample and more than 60% of the poor. In particular PAs such as ACH about 88% of the poor are without oxen. Compared with the oxen-deficient at the national level,⁸ the one obtaining in the study areas seems to exhibit a far better scenario. Nevertheless, it is still quite a significant proportion given the fact that access to oxen is consequential and involves strict exchange mechanisms, unlike land whose skew distribution can be rectified through redistributive measures.

That the ox-plough requires a pair of oxen meant that those with either none or only one have to depend on others to execute critical agricultural practices. This dependence shapes the relations in which the oxen-deficient households ought to enter with others such as the informal land markets would involve. Several institutions of accessing oxen have developed including (i) *meqenajo* (yoking) in which two households each with a single-ox has to contribute and plough their fields alternately; (ii) *minda* or *megazo* where households with surplus oxen hire it out (for an agreed amount of grain) for an agreed number of seasons (usually one) in which caring for the ox is the sole responsibility of the tenant while the owner regularly makes the supervision; and (iii) *exchange for labour* in which the ox-deficient households have to work for others in return to the use of oxen on their fields. These institutions have provided effective means for those in richer stratum to increase seasonal landholdings (via the operation of the informal land markets), and/or to lend oxen to the poorer ones and secure access to their labour. Hence, a mechanism has been created with which oxen labour is redistributed in favour of the poorer households.

Informal land markets have a function of redistributing not only land, labour, and other resources, but also that of output and through it the direct production entitlement of households. Significant inter-strata differences could be observed with respect to the volume of production of all crops. The rich produces the largest and the poor the lowest. Table 6 summarises

the distribution pattern of per household, per AE and per LE grain production⁹ by strata for each PA.

Table 6: Inter-strata Comparison of Grain Production by PA (Mean kgs)

Grain Production	WL			ACH			LCH			LG		
	Rich (10)	Middle (19)	Poor (15)	Rich (10)	Middle (16)	Poor (17)	Rich (5)	Middle (28)	Poor (18)	Rich (5)	Middle (18)	Poor (11)
per Household	4586.4	3531.8	1775.7	3875.0	1465.6	680.9	6048.0	4011.8	2191.7	5260.0	3319.4	844.1
per AE	1119.8	1476.2	695.8	621.0	468.0	291.3	1023.2	1176.5	668.8	1262.9	898.1	352.4
per LE	835.9	1198.4	521.8	485.9	304.4	213.8	804.4	776.5	465.8	840.5	535.6	241.7

Figures in parenthesis indicate sample sizes

First, starting from the obvious, inter-strata differences in grain production per household are very significant; the rich produces the largest while the poor the lowest. Second, inter-strata differences in per LE production are also significantly different for all PAs; again the poor performs the least. Third, inter-strata differences in per AE production are even much more pronounced than that in per LE; the poor exhibit the lowest. Note that the pattern of inter-strata differences in grain production is similar across the different PAs (Annex 2).

In order to see how the land redistributive function of informal rural land markets could be translated into an output redistributive function, a regression equation is estimated in which per household grain production (HGP) is a dependent variable and is regressed on leased land (LZ), oxen ownership (OX), labour endowment (LE) and strata dummies:

$$HGP = \alpha + \beta_1 LZ + \beta_2 OX + \beta_3 LE + \beta_4 DH + \beta_5 DM + \beta_6 DP + \varepsilon \quad (1)$$

where DH , DM , and DP respectively are dummies for richer, middle and poorer stratum; α is a constant term; β_i 's are parameters to be estimated; and ε is an error term. If any variation in production arises from variations in land cultivated, then it could be hypothesised that this may be ascribed to the movement of land through the mechanism of the informal land markets – since the major source of variation in land cultivated comes from the operation of land markets. Regression results are reported in Table (7). As could be seen, both the magnitude and significance of the parameter

estimate attests to the fact that informal land markets have an important output redistributive function.

Table 7: Regression Results of Grain Production

Regressors	Peasant Association			
	ACH (n=43)	LCH (n=51)	LG (n=34)	WL (n=44)
<i>Constant</i>	101.21 (354.68)	697.86 (552.99)	2793.41 (1674.31)	1319.64 (518.37)*
<i>LZ</i>	989.43 (156.94)*	1149.14 (326.06)*	1493.56 (405.96)*	1501.92 (359.35)*
<i>Oxen</i>	-142.73 (288.39)	390.24 (245.97)	521.78 (273.94)* *	430.62 (222.14)* *
<i>LE</i>	379.23 (90.72)*	374.63 (110.39)*	-275.05 (203.81)	355.54 (145.39)*
<i>DH</i>	425.15 (698.09)	-1005.30 (1141.73)	<i>dropped</i>	-735.21 (835.6)
<i>DM</i>	-248.82 (505.12)	103.44 (550.17)	-647.89 (1038.79)	-328.99 (623.77)
<i>DP</i>	<i>dropped</i>	<i>dropped</i>	-650.25 (1038.79)	<i>dropped</i>
<i>R² Adjusted</i>	0.84	0.60	0.64	0.57

*Significant at less than 0.05 level; ** significant at less than 0.1 level.

Figures in parenthesis indicate standard errors.

Such output redistributive function of informal land markets could be directly transmitted into income redistributive function via the operation of product markets.¹⁰ The significance of the inter-strata differences in value of production could be easily detected from Table 8 and Annex 3 in which inter-strata differences in value of grains produced are significant; in all cases the poor performed by far the least. The same pattern could also be observed when per AE and per LE issues are considered. It can be seen that total value of production, labour productivity (value or production per LE) and grain availability per AE of the poor has been the lowest throughout while total value of production has been the largest for the rich throughout. As a result direct production entitlement of the poor is reduced as less output could be produced, rendering the household vulnerable to external shocks. This is significant in view of the fact that the majority of rural

households are food insecure for most of the seasons on the one hand and the extremely limited opportunity for wage employment in agriculture on the other hand.

Table 8: Mean Values of Crops Produced (in Birr)

Value of Grain Production	WL			ACH			LCH			LG		
	Rich (10)	Middle (19)	Poor (15)	Rich (10)	Middle (16)	Poor (17)	Rich (5)	Middle (28)	Poor (18)	Rich (5)	Middle (18)	Poor (11)
per House hold	6600.6	5138.4	2578.9	7640.7	3013.5	1419.7	8006.2	5418.3	2969.9	6700.6	4192.2	1025.6
per AE	1191.1	1732.5	758.1	941.6	629.0	460.2	1065.6	1049.4	630.4	1066.4	673.5	298.8
per LE	1597.6	2133.0	1008.0	1207.5	963.3	622.9	1353.6	1586.5	901.6	1595.3	1133.2	435.1

Figures in parenthesis indicate sample sizes

Evidently, the same process would also help the richer households to internalise some of the externalities in terms of improving direct production entitlement as more food is produced on the farm rather than being purchased. The significance of this is bolstered when one reckons the fact that richer households are characterised by larger subsistence units and tend to absorb additional labour into their household on a longer-term basis, bidding the household demand for food to be higher. That food is directly produced rather than purchased meant that these households are not vulnerable to market uncertainties and undesirable food price rises.

It goes without saying that access to additional cultivated land generates additional farm incomes, which are used either to increase consumption or used to expand production capacities mainly in terms of financing non-farm businesses (shops, flour mills, trade, etc.) Since informal land markets redistribute land towards the richer and away from the poorer households, and since this in turn redistributes production in favour of the former causing per AE grain production to increase, it is conceivable to hypothesise that informal land markets could have a marketed surplus creating and redistributing function; the latter could be primarily but not exclusively towards non-agricultural sectors as the output produced in excess of consumption requirements is marketed. Hence, one could argue that informal land markets have an accumulative function for the higher rural stratum.

From the vantage point of those households in the poorer stratum, even though much of the functions of informal land markets that facilitate accumulation for the rich does not seem to particularly benefit the poor, in absence of viable alternative mechanisms, they have some important functions to perform without which conditions for poor households could have been perhaps worse. Informal land markets are part of the social networking mechanism in which not only the rich but also the poor could derive some indirect benefits in terms of improving access to farm resources (e.g., oxen through labour exchange), facilitating access to credit (cash and kind), providing limited seasonal employment opportunities, etc.

A logical question that would arise would be 'what mechanisms do exist to engender such a redistributive role of informal rural land markets? Assuming that households' holding of oxen and labour are the most important determinants of area to be cultivated, a linear regression of total cultivated area on number of oxen owned, LE and dummies for strata differences shows a strong correlation and highly significant coefficients for oxen ownership. The equation is estimated thus:

$$TCL = \alpha + \beta_1 OX + \beta_2 LE + \beta_3 DH + \beta_4 DM + \beta_5 DP + \varepsilon \quad (2)$$

where 'TCL' is total cultivated land; OX and LE respectively represent oxen ownership and labour endowment of households; DH, DM, and DP are respectively dummies for the richer, middle and poorer strata of households; α is a constant term; β_i 's are parameters to be estimated. The regression results are reported in Table 9.

Table 9: Regression Results of Total Cultivated Land

Regressors	Peasant Association			
	ACH (n=43)	LCH (n=51)	LG (n=34)	WL (n=44)
<i>Constant</i>	0.212 (0.316)	1.054 (0.230)*	1.904 (0.822)*	0.554 (0.227)*
<i>Oxen</i>	0.623 (0.227)*	0.316 (0.097)*	0.244 (0.128)*	0.363 (0.095)*
<i>LE</i>	0.238 (0.087)*	0.036 (0.048)	-0.016 (0.100)	0.078 (0.060)
<i>DH</i>	0.615 (0.649)	0.825 (0.471)**	<i>dropped</i>	0.736 (0.324)*
<i>DM</i>	0.149 (0.472)	0.334 (0.232)	-0.165 (0.499)	0.479 (0.254)**
<i>DP</i>	<i>dropped</i>	<i>dropped</i>	-1.247 (0.757)	<i>Dropped</i>
R ² Adjusted	0.73	0.57	0.64	0.64

*Significant at less than 0.05 level; ** Significant at less than 0.1 level.

Figures in parenthesis indicate standard errors.

It could be seen that in all cases, after sweeping out the impact of other variables, the power of oxen ownership has been quite significant in explaining inter-household variations in total land cultivated. Its impact is much more pronounced in areas such as ACH where crop-livestock competition for land has led to disappearance of pasture, therefore limited both the size and composition of livestock. Even in areas such as WL where mechanisation has been practised for ploughing and harvesting operations, which make the extent of dependence on oxen somewhat loose, the importance of oxen ownership in explaining variations in total cultivated land has been substantial.

CONCLUDING REMARKS

This paper set out to investigate the redistributive functions of informal rural land markets in the context of cereal producing landed peasants in central Ethiopia. It sought to stratify peasant households into different status groups on the basis of local perceptions. Patterns of allocated land distributions among the different strata of peasant households seem to have somewhat favoured the richer rather than the poorer households although the differences were not significant. However, they were more egalitarian when measured in terms of per adult equivalent units, signifying the importance of the very criteria on the basis of which land had been allotted

to peasants. Hence, the relatively larger plots allocated to richer households merely reflected differences in AE, which are significantly larger in the case of these households.

The majority of households (over 60%) were found to be involved in informal rural land markets. In terms of strata, this would be 77%, 61% and 57% for the richer, middle and poorer households respectively. Fixed-rentals and sharecropping were the two important forms of informal land markets, the former being the dominant one in all the PAs, but one. Those in the richer and middle strata of households tend to have opted for fixed-rental contract, while those in the poorer mixed both. Apparently, the richer and the poorer households enter into such contracts as tenants and landlords respectively; while in the middle stratum those contracted-in made up for 95%, the remaining 5% having to contract out. Such an observation might suggest that the single most important source of land supply in the informal rural land markets is the landed rural poor peasant households.

When informal land markets are introduced into the picture, the inter-strata differences in total cultivated land have become significant measured either on the basis of per unit of household, adult equivalent, or labour equivalent; such markets have in fact redistributed land towards the richer and away from the poorer households. This creates necessary condition for the labour of the poorer households to be redundant and seasonally work for the richer ones often at low wage rates. The same process leads to reconfiguration of labour allocation as family members of the richer households are engaged in human capital formation made possible through an easy access to the poorer labour. Similarly, and as a consequence, agricultural output whether in physical or value terms (measured in total, per household, per labour equivalent, or per adult equivalent), is redistributed towards the richer households and away from the poorer ones; so is direct production entitlement. *Leased land* was found to be the significant variable in explaining much of the variations in grain production levels. This may not be surprising in view of the strong correlation of output with area cultivated in peasant production in Ethiopia in general on the one hand, and the egalitarian distribution pattern of allocated land among peasant households in the area on the other. By contrast, seasonal access to oxen power, credit, and limited seasonal wage employment are redistributed towards the poorer ones.

Households' oxen ownership rather than labour endowment is found to be the most important factor that engendered such a land redistributive process. It could be suggested that an excess ox is mostly used as a leverage to improve access to land through the functioning of informal rural land markets; therefore as long as strong link persists between 'ox-ownership' and 'farming', households without oxen would continue to transfer their land use rights irrespective of its shortage to meet their household subsistence requirements. Much of the explanation for the sources of observed discrepancies in oxen ownership among the different strata of households unavoidably would reside within the differentiated capacities, which were contained and used in local perceptions to stratify the peasants.

Hence, the analysis in this paper would shed some light on the significance of transactions involved in informal land markets as personalized relationships that would have asymmetry of impacts on different groups. The process must be viewed from the perspective that farming constitutes the most important source of employment, income, and livelihood for the majority of peasants. Low performance in terms of reduced production and incomes at a particular year will have cumulative impacts on subsequent opportunities and livelihood processes, on shaping the form in which social and economic relations are to be mapped out, and on the broader issue of agricultural growth. The argument for liberalisation of rural land markets should be seen in this light, for such a land policy in a structural setting where there persists massive rural poverty and significant deficiency in endowment of key factors might result in unintended social outcomes unless there is some compensation mechanism through other means such as productive non-farm employment for the poorer groups.

In view of such a state of affairs as described in the paper, the relevant policy questions that would evolve would be (a) what would be the likely impacts of privatization and liberalization of rural land markets on agricultural productivity and rural poverty? And, (b) which alternative institutions could be reaped to harness local capacities in addressing the objectives of agricultural growth and reducing rural poverty in a better way? To the extent that such issues are consequential, they should form an integral part of the agenda that guide future development research direction.

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Notes

¹ Statistical tests for normality (based on skewness/kurtosis) and homogenous variance (Bartlett's test) indicate that the assumptions of variance analysis are not satisfied always. The differences are not just in variances but also in the distributions (shapes) as could be seen from box-plots. Hence significance tests would in some cases be inappropriate.

² The reason why LCH seems a special case is that availability of irrigation facilities made it possible for the richer households to switch part of their cultivated land to the production of potatoes rather than grains. In fact, following the dismantling of the PC, land was redistributed in a strictly egalitarian manner on per household basis (irrespective of differences in family sizes). Therefore, caution is necessary in interpreting the above distribution pattern.

³ For details of the arguments and derivations see Abebe (2000: 309-310).

⁴ It seems that the normality assumption can be maintained at 0.05 probability level for all but the rich stratum in ACH. Similarly the assumption of homogenous variance seems to be satisfied (at 0.05 probability level).

⁵ This could vary for example from 120 up to 300 birr per $\frac{1}{4}$ of hectare.

⁶ National Bank of Ethiopia, Annual Report, 1995.

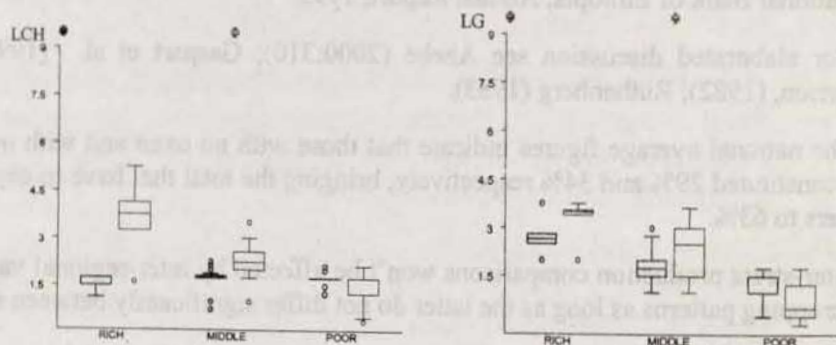
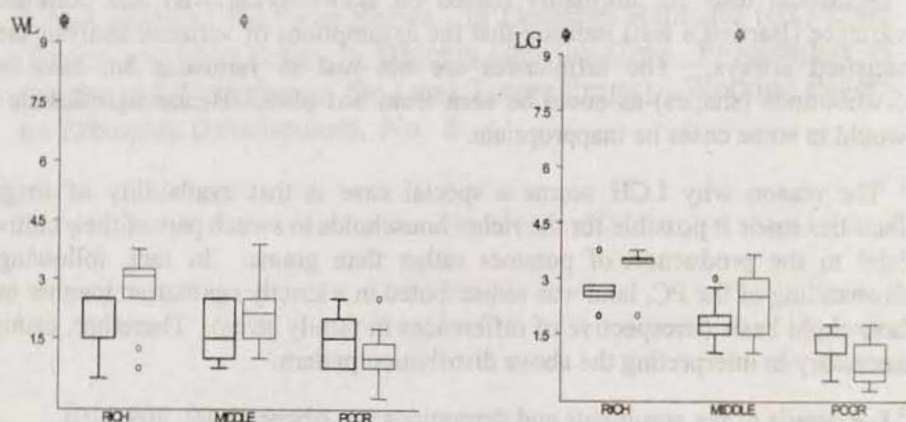
⁷ For elaborated discussion see Abebe (2000:310); Gaspart et al. (1998:173); Johnson, (1982); Ruthenberg (1983).

⁸ The national average figures indicate that those with no oxen and with only one ox constituted 29% and 34% respectively, bringing the total that have to depend on others to 63%.

⁹ Inter-strata production comparisons won't be affected by inter-regional variations in cropping patterns as long as the latter do not differ significantly between strata.

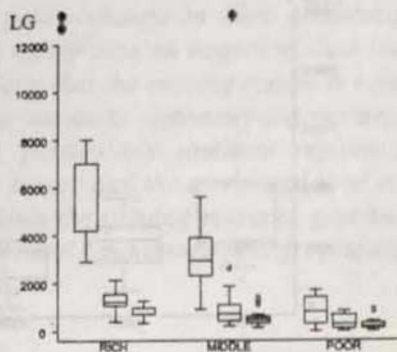
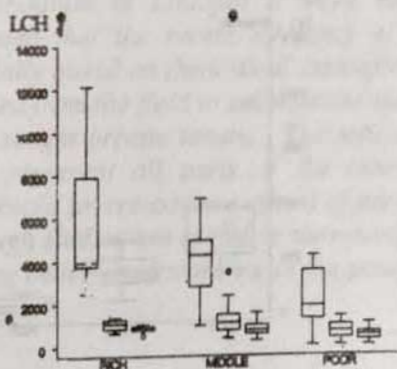
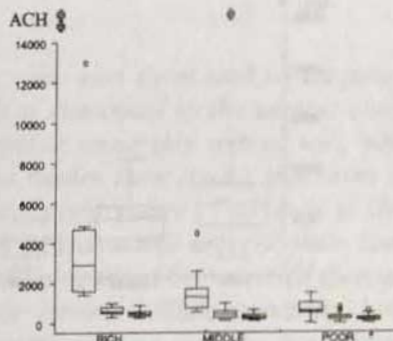
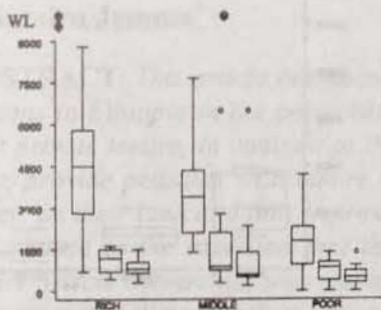
¹⁰ Notwithstanding the fact that product markets are characterized by significant seasonal price variation, and the poor being at the losing end, all crops are, however, valued at their respective prices prevailing immediately after harvest time in each PA.

Annex 1: Comparative Box-plots Distribution of Allocated Land and Cultivated Land (Hectares)



The first and second boxes from left to right in each PA and stratum respectively measure the initially allocated and total cultivated land respectively.

Annex 2. Box-plots Distribution of Total, per AE, and per LE Grain Production by Strata



The first, second, and third box-plots from left to right represent respectively the level of grain production per household, per AE and per LE.

Annex 3. Box-Plots Distribution of Value of Grain Production by Strata

