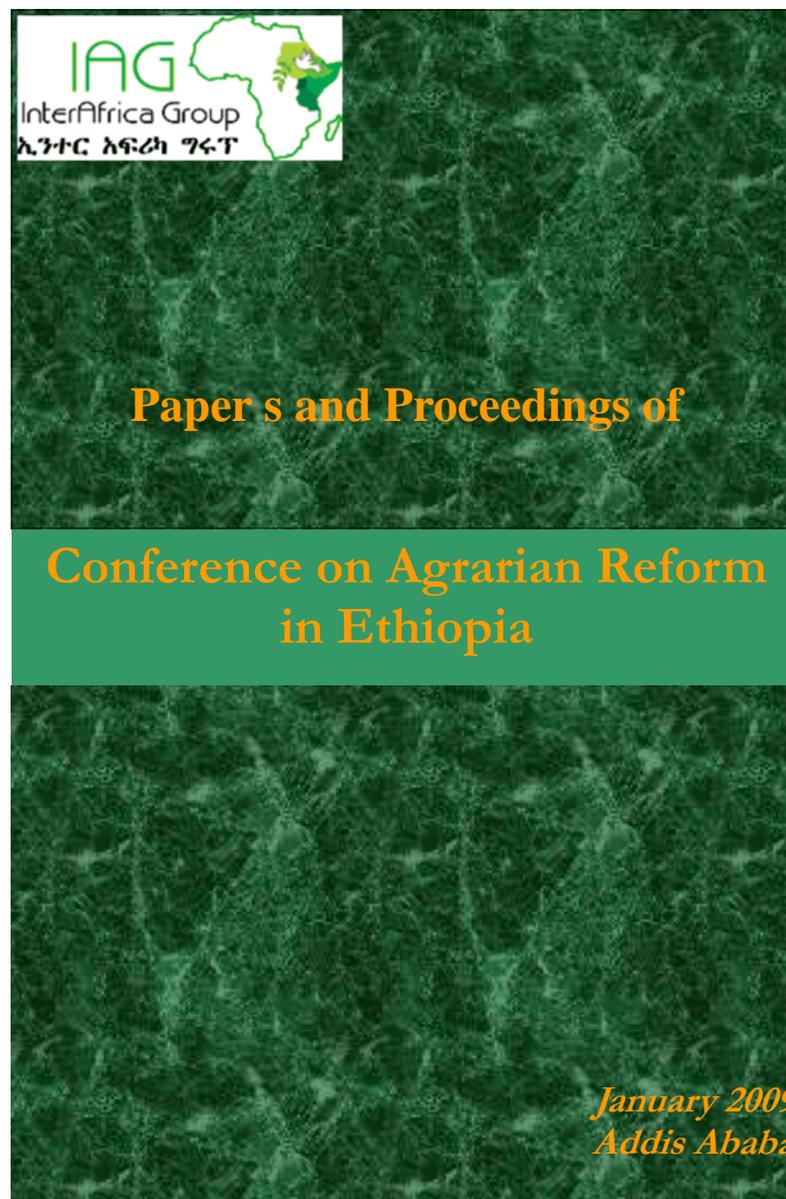


InterAfrica Group (IAG) is an independent, non-profit, non-governmental regional organization established in 1989 to promote peace, human rights, democratic culture, and development in the Horn of Africa. IAG's vision is a Horn of Africa where human rights are respected, democratic culture flourished and economic development achieved. IAG covers issues concerning the countries of the Horn, namely Ethiopia, Eritrea, Sudan, Somali, Kenya, Uganda and Djibouti, while also dealing with issues that have wider relevance to the continent.

IAG's programs combine networking, advocacy, dialogue and research on policy issues. We strive to achieve these goals through the following major activities in collaboration with governments, inter-governmental organizations and CSOs:

- Organizing conferences and forums for informative exchange of views and debate on social, political and economic issues concerning the Horn of Africa
- Undertaking research on critical socio-economic and political issues in the sub-region
- Publishing and disseminating information on vital socio-economic and political interests to policy makers and citizens at large

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⁸ Note that there are five significant differences (out of possible fifteen) with levels of significance falling between 5 percent and 10 percent. These are: yield contributions in the case of sorghum, wheat, and *teff*; and area and price contributions in the case of *teff*.

⁹ Zones were classified into 13 domains using the criteria developed in Chamberlin et al. (2006) as it stands. Statistically significant differences in growth cannot be detected in this case as well.

¹⁰ Here, regional extension programs refers primarily to: (a) development (i.e., extension) agent services and farmer training centers provided at the *kebele* level; (b) subject matter specialist services and administrative support provided by *woreda* offices of the regional bureaus of agriculture; and (c) strategic, budgetary, and administrative support provided by the regional bureaus of agriculture.

¹¹ Consult Chamberlin et al. (2006) for further details on the thresholds used and other details of the classification.

¹² The administrative zones were also classified into the original development domains as well. This identified 13 such domains in the four regions covered by the study. Nothing of the results changed as a consequence.

¹³ The simpler classification was maintained as a consequence. Chamberlin et al. (2006) conduct the relevant computations at the *woreda* level such that each *woreda* is assigned to a domain.

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Foreword

In the past four decades the Ethiopian agrarian policy has undergone major reforms starting with the land reform of 1975, including, the Ethiopian Peoples Revolutionary Democratic Front (EPRDF) 1991 Agriculture Development Led Industrialization Policy (ADLI) and the 2003 Rural Land Certification Program.

The various types of communal and private ownership of land that existed previously were abolished and replaced by public ownership of land with the 1975 land reform legislation, which was the first legal measure to end the exploitative landlord-tenant relation and introduce social justice in rural Ethiopia.

The rural land tenure structure that existed before the 1975 land reform had stagnated agricultural productivity, particularly, in the southern regions in Ethiopia, due to lack of security of tenure and the lack of incentive to increase production. The tenant farmer not only lived under the constant threat of eviction (subjected to the will of the landlord), but was also compelled to give away a substantial portion of his surplus production to the landlord under share cropping arrangements.

Hence, the 1975 Land Reform was designed to establish social justice, and result in security of tenure and increased income to the marginalized rural population. In the same vein, the 1991 EPRDF Agricultural Development Policy and the subsequent Land Certification Program were introduced to enhance agricultural productivity, ensure food security, and thereby improve the rural livelihood. However, while a steady economic growth has been observed during the past decade, persistent food shortage problems and abject rural poverty are still witnessed.

The debate between those who advocate a robust privatization of rural land and those who support the current usufructuary right of land tenure, known as public ownership, is long lasting. Those who oppose the prevailing public ownership of rural land contend the

Footnotes

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² Research Fellow, International Food Policy Research Institute, PO Box 5689, Addis Ababa, Ethiopia.

³ Research Officer, International Food Policy Research Institute, PO Box 5689, Addis Ababa, Ethiopia.

⁴ An important caveat – definitive inference about the relative magnitude of fertilizer application requires robust estimates of the response of yield to fertilizer use and other measures of returns to such use. The statement in the text reflects a comparison with intensity in countries like Egypt, Bangladesh, India, and Vietnam. Nevertheless, note that the rate in Ethiopia fares better when the comparison is made in terms of fertilized area (the last three columns of Table 2).

⁵ *Source*: Selected, or computed as appropriate, from FAOSTAT data, last accessed in November 2008 at <http://faostat.fao.org/site/567/default.aspx#ancor>. “Cereal yield, measured as kilograms per hectare of harvested land, includes wheat, rice, maize, barley, oats, rye, millet, sorghum, buckwheat, and mixed grains. Production data on cereals relate to crops harvested for dry grain only. Cereal crops harvested for hay or harvested green for food, feed, or silage and those used for grazing are excluded.” – FAO.

⁶ CSA defines a *holder* as: “... a person who exercises management control over the operation of the agricultural holding and makes the major decision regarding the utilization of the available resources. He/she has primary technical and economic responsibility for the holding. He/she may operate the holding directly as an owner or a manager. Under conditions of traditional agricultural holding the holder may be regarded as the person, who with or without the help of others, operates land and/or raises livestock in his/ her own right, i.e. the person who decides on which, where, when, and how to grow crops or raise livestock or both and has the right to determine the utilization of the products.” See, for example, CSA (June 2008).

⁷ The national CPI is used because zonal-level CPIs are not available and even region-level CPIs exist only for the more recent years.

3. three classes of population density:
 - *high population density*: greater than 176 persons per square kilometre;
 - *medium population density*: between 44 and 176 persons per square kilometre;
 - *low population density*: less than 44 persons per square kilometre

The present study adopts a pared-down version of the framework in order to focus on market access and agricultural potential only.¹² Administrative zones were classified into four development domains using only agricultural potential and market access as of 2001/02 – ‘high market access and high agricultural potential’, ‘high market access and low agricultural potential’, ‘low market access and high agricultural potential’, and ‘low market access and low agricultural potential’. Each zone is assigned to a domain according to the largest fraction of *woredas* within it that were identified with high (low) market access and high (low) agricultural potential.¹³

Together, the zones covered by the study account for about 82 percent of the *woredas*, 62 percent of the surface area, and 86 percent of the population (these are based on the shares in 2005 when the original domain classification was conducted).

Table A1: Classification of Agricultural Potential Zones

Agricultural Potential Zone	Rainfall Rules	Elevation (masl)
Highlands Moisture reliable	$(\text{rain}/\text{rainCV}) \geq 0.1$	> 1500
Highlands Drought prone	$(\text{rain}/\text{rainCV}) < 0.1$	> 1500
Lowlands Moisture reliable	$(\text{rain}/\text{rainCV}) \geq 0.2$	< 1500
Lowlands Drought prone	$(\text{rain}/\text{rainCV}) < 0.2$	< 1500
Lowlands Pastoralist	$\text{rain} < 300$	< 1500

Source: Chamberlin et al. (2006).

Notes: Rain: average annual rainfall (mm); rainCV: coefficient of variation of average annual rainfall; masl metres above sea level.

existing land policy is the primary cause that undermines agricultural growth.

Others who advocate the continuity of the existing policy argue that in the absence of fast growing industrialization, that is labor intensive, privatization of rural lands will result in drastic economic crisis and massive unemployment.

This unsettled debate and the chronic food insecurity in the country compels us to raise a number of fundamental questions. Are the current agrarian policies adequate and effective enough to deliver the expected productivity and agricultural development? What are the relevant lessons we can adopt from the experience of other countries that pursued similar policies? To what extent has the Ethiopian agrarian policies addressed the gender dimension?

The three papers presented in this publication by the distinguished scholars, and the proceedings of the conference will provide a road map that deals comprehensively with these complex questions and suggest evidential policy recommendations which would contribute to the attainment of the nations agrarian reform policies.

Inclosing, I would like to express my gratitude to Dr. John Bruce, Dr. Zongmin Li, Dr. Alemayehu Seyoum, Dr. David Spielman and Dr. Dawit Kelemework for sharing with us their rich experience and research papers.

Tamrat Kebede
InterAfrica Group, Executive Director

*We take this opportunity to once again
express our appreciation to the
Royal Governments of Sweden and Norway
for funding this conference on
“Agrarian Reform in Ethiopia”.*

Annex 1 Development Domains

The *development domains* framework was developed as a conceptual device to augment understanding of location-specific potentials for alternative rural development pathways (Chamberlin et al. 2006; Pender et al. 2004; Wood et al. 2001). Such a framework can provide a number of benefits. First, when observed changes in production are mapped onto the development domains established meaningful patterns may be uncovered. Second, development domains can serve as a means of distilling hypotheses regarding expected patterns of change. For instance, domains with higher market access may allow greater diversification into ‘cash’ crops. In short, the domains framework has the potential to highlight sub-national agricultural growth potential/constraints and corresponding outcomes.

Development domains are defined as geographic locations sharing broadly similar rural development constraints and opportunities. The classification in Ethiopia is based on the combination of four characteristics that best capture livelihood heterogeneity among smallholders in Ethiopia (Chamberlin et al (2006). These characteristics are population density, distance to the closest market, altitude, and moisture reliability (the latter two are viewed as a summary of agricultural potential). Their aggregation is based on thresholds established to maximize the predictive power of the domains. The final domain definitions were based on:¹¹

1. five agricultural potential zones, as described above: moisture reliable highlands, drought prone highlands, moisture reliable lowlands, drought prone lowlands, and pastoralist lowlands rain (Table A1);
2. two classes of market access:
 - *high market access*: less than 3.3 hours mean travel time to the nearest town of at least 5,000 persons;
 - *low market access*: greater than 3.3 hours mean travel time to the nearest town of at least 5,000 persons;

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Proceedings of InterAfrica Group's Symposium on Ethiopian Agrarian Reform

January, 2009
Addis Ababa

Introduction

Ato Tamrat Kebede, executive director of InterAfrica Group (IAG) opened the symposium by highlighting the three land reform measures that began with the first legal act against rural land tenure which occurred in 1975. The reform was envisioned within the backdrop of social justice through the provision of security of tenure for the rural population and the abolishment of the land-lord tenure relation. Lack of security in tenure, and lack of incentive to increase production had stagnated the ability of Ethiopian farming to develop particularly in the southern region. This was followed by the EPRDF led ADLI policy (Agriculturally Led Industrialization) in 1991. Thirdly, the current reform agenda based on the rural land certification program was implemented in 2003.

Ato Tamrat noted that although steady growth has been witnessed since the implementation of these programs, abject poverty and food shortages are still ever present. He indicated the conference on agrarian reform was intended to address the numerous issues surrounding agrarian reform, including the question of public ownership of land, the gender dimension of agrarian development, lessons from other countries such as China and whether current policies are effective in improving production and promoting development. .

The conference posited the developments of agrarian reform in Ethiopia with China and also attempted to address the nature of economies of production. Some of the highlights of these discussions included an important distinction between growth and measuring the growth of productivity, which necessitates an analysis of increases in yield alongside other processes such as environmental costs. The need to include regulation in the privatization process,

especially in relation to seed production was also highlighted.

Holdings efficiencies were addressed as part of the economies of production and there was an acknowledgment that smaller holdings can be more efficient because they are more intensive. This directly challenges the argument that advocates increasing acreage as a method of increasing productivity. A point of agreement was the need to see equitable distribution of capital alongside attempts to increase state capital accumulation. This encapsulates the ideal of social justice as part of the development program. The capacity of transferability in relation to women's rights to extend land ownership to their descendants was identified as an important policy area that required further assessment. Finally, diversification of inputs (fertilizers and seeds) used in the agricultural extension programs was recommended

Proceedings

The first presenter was Dr. John Bruce, whose background includes a research position in China with the World Bank, and authoring five books on the topic of land reform. The comparative paper presented by the author titled "Land reform in Ethiopia and China: Parallels and Divergences," concentrated on the Chinese experience on land reform in the period following the collapse of the commune system. There are currently two types of Chinese land ownership rights dichotomized into urban and rural collectives. Urban land is state owned, inheritable, and can be leased and mortgaged. In the rural collective system land allocation is carried out by village collective institutions. Although the villages have stronger ownership rights than the urban system, the state can still requisition them for state use. There are three categories of rural collectives, residential which are the most secure form of rural land collectives, construction land which are guided by diverse contracts and farm land which are guided by the household responsibility contract. The household responsibility contract originated from the commune system where members of a household that received land also attained a contract stating basic responsibilities, for example the promise to produce

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certain types of food crops. Currently, this system has been phased out.

The division of land across urban and rural lines has faced some controversy because urban land has market value via leasehold rights which can be traded, while rural land is not assigned a concrete market value. Consequently, there is a marked advantage in absorbing rural land into the urban collective where they are assigned a market value substantially increasing their significance. This has been advantageous for municipalities. However, there are serious problems with this process. Firstly, compensation for absorbed rural land is based on the agricultural output of the land and the value of the buildings. This method of compensation has proven to be unsuccessful, since many have felt that the financial compensation does not measure up with the acquired land. Often disputes over compensation have erupted into violent confrontations. Secondly, with the increased acquisitions of rural lands, the apparent pull of development projects to the outskirts of cities has led to the destruction of large tracts of farm land. Thirdly, off budget resources for the municipalities has increased the potential for corruption. This is coupled with the massive incentive for municipalities to continue absorbing land due to the one time pay off with the requisitioning of land. Since there are not any recurring payments, municipalities may be inclined to continue acquiring land in order to maintain their off budget resources. In addition to the above points, the banking system has also faced increased pressures because according to the Chinese state the ability to borrow off the land has threatened the stability of the banking system.

These obstacles have led to the induction of the some regulatory measures, however they have not been properly enforced primarily because the incentive for municipalities to maintain the current system is too large. The discussion on possible solutions has consequently shifted towards reducing the disparity between urban and rural land. Recent moves towards decreasing the disparity have included increasing the marketability of construction land and a program to register household land holding rights. The nature of

collective land ownership has also been clarified through a new property law that has made it clear that members in the village have partial ownership rights in the village public ownership schemes.

Dr Bruce subsequently addressed agrarian reform in Ethiopia, which has exhibited broadly similar trends through various political regimes with variation expressed through regional efforts. The inclination has been towards phasing out periodic allocations, and efforts to make holdings inheritable, although transferability is still limited.

The similarities between China and Ethiopia include the pressure of intense population growth. Both countries are attempting to reduce redistribution; however, there is a reluctance to abandon public ownership. There are also marked differences between the two countries. China is dealing with irrigation fed agriculture while Ethiopia is dealing with rain fed agriculture. Consequently, although Ethiopia has more agricultural holdings than China, Chinese holdings produce more due to the irrigation system. Allocation systems are also different in the two countries; in Ethiopia some parts of the country have seen individual allocation, while in China allocation are imparted on a household basis. In China different alternative tenure systems were created in different areas, allowing for experimentation on different systems of land allocation. Furthermore, in China scaling up has been approached through the use of market system and the institution of land use rights. Both have been significantly lacking in the Ethiopian land reform process.

Ethiopia is faced with obstacles and constraints in the attainment of parity in agricultural production. For example, urbanization in Ethiopia happened relatively late, which has direct consequences on the ability of urban areas to absorb food stuffs produced by the agricultural sector. The processes of urbanization needs to be considered since it has an influence on the development of the agrarian system via the creation of a consumer sector. The Ethiopian system lacks the incorporation of multi-track development policies especially in comparison to the Chinese approach of following inte-

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grated development policies. The inclusion of pilot land tenure reforms would facilitate the creation of various alternatives that could result in efficiency of which would be aided by the federal setup on the Ethiopian state.

The discussant for Dr. Bruce's paper was Mr. Tamrat Kebede. He began his presentation by putting forth the background of land reform in Ethiopia, which was not purely guided by ideology but rather was led by a small group of leftist leaning civil servants. The prevailing activism against land tenure was based on the intent to terminate exploitative landlord-tenant relation and provide security of tenure as well as open access to the landless and address the problem of increased mechanization leading to displacement. The focus was on social justice as opposed to economic productivity. Subsequently, he summarized the similar aspects of the agrarian policies of Ethiopia and China (e.g. the prohibition of private ownership of rural land, decentralized administration, limited redistribution of buildings). The presenter next addressed the process of collectivization via communes in China which was combined with an amassment of skill and technology. In this regard he noted that there have been very different trends in the two countries. Other developments have not been seen in Ethiopia including the application of stringent population control methods, the placement of irrigation systems, improvement in land use programs, and pilot research imperatives. The discussant ended by questioning whether the current agrarian policy in Ethiopia could be effective without coalescent efforts for industrialization as well as population control methods.

Discussions began with Dr Bruce responding to some of the questions raised by the discussant. He addressed the progression of agrarian reform in China which displayed the importance of the timing and pace as seen in the country's gradual and selective process of liberalization. In general terms coordination is a crucial part of the agrarian reform process. A participant continued the discussion by stating that debate over public versus private ownership in Ethiopia is a mute point because the rights over land ownership are

already enshrined in the constitution. The participant suggested that the debate should instead be on what rights individuals have in the makeup of public land ownership. The participant also added that in Ethiopia there is a lack of coordination of land policy from the central government coupled with a weakness in research capabilities, and requested for more clarification on how China coordinates its land policies. A second participant also added that the debate over land ownership in Ethiopia should concentrate on whether current policies are being enforced, and also requested that the presenters elaborate on how China managed to scale up production. A third participant stated that the issue of landholding rights as presented in the Ethiopian constitution is deadlocked because the marketability of rural land is barred. The current process of registering land may not resolve issues of marketability but it would create lease/rental rights and would increase the ability of adjudicating conflicts over land belongings. However initiating registration may be a challenge because the size of holding in Ethiopia is unknown. A fourth participant asked at what stage rural industrialization efforts have reached, and what the size of current investments are in comparison to China.

Mr. Tamrat Kebede in responding to the queries on the constitutionally determined status of landholding rights in Ethiopia, underscored that it does not entail everlasting rigidity on the status of landholding since constitutions can change in time via amendments. Dr Bruce next addressed the nature of land coordination in China. Coordination of land policy in China is guided by the Bureau of Land Management which is located within the Central Government. The responsibilities of this office extend from the central government to the local government down to the township level. The day to day administration is left to the provinces, counties and municipalities. By and large the Chinese government has taken a leadership role in the process of reform, while leaving enforcement to the local authorities. The enforcement of land policy through the local level is grounded in the general mistrust towards law as a tool in Chinese history. The legal system was used as a general framework allowing for many levels of experimentation at the local level.

evidence-based analysis and policy recommendations, and continuous debate on the pros and cons of alternatives and options.

Ultimately, given the GoE's priorities for agriculture and rural development, this paper implicitly suggests several points for further consideration. First, efforts to introduce technology packages must consider the wide variance in institutional and agroclimatic situations in the country's smallholder economy to develop locally-specific solutions rather than national campaigns. Second, the conventional role of the public sector in all aspects of smallholder production must be reconfigured to allow for the entry of private players which can contribute much to increasing productivity and commercializing surplus output. Third, policies that target or favor one type of organization over another (e.g., state-owned enterprises, or cooperative unions) in the provision of inputs or services for smallholders are generally ineffective and unsustainable.

This is not to say that the public provision of inputs, credit, and information is unnecessary. Rather, public intervention will remain a critical component of an agricultural economy characterized poor market infrastructure and access, weak purchasing power among smallholders, and asymmetrical access to information. However, the absence of appropriate degrees of heterogeneity and competition among inputs and service providers in rural Ethiopia may be a constraint on growth. The development of a more dynamic and competitive agricultural sector in Ethiopia requires the introduction of rural institutions and organizations that respond effectively to rapidly changing market and technological conditions. This suggests the need for policies and programs designed to create more space for both public and private input and service providers in the rural economy.

scope for the introduction of banking policies that favor seed producers, agroindustry, input production, and other agricultural sector investment similar to those currently favoring the floraculture industry. Despite the obvious risks involved in lending to agricultural investors (rainfall variability, market volatility, and so on), a forward-looking agricultural development-led industrialization policy must prioritize these types of ventures.

A good starting point for reforms might be the maize sector where private seed producers can quickly recoup their returns on investment. In doing so, there might even be an opportunity to encourage the entry of foreign seed companies—building on the presence of Pioneer—from North America, Europe, and eastern/southern Africa.

What remains to be addressed in this scenario is the underlying role and contribution of agricultural extension and education. A medium-term scenario like this would allow the extension and education systems to begin processes of deep reform—reforms that are designed to extricate the system away from single-minded, top-down, package approaches to cereal intensification, to more dynamic, responsive, and competitive service provision. These types of approaches will require greater flexibility within the current system that can only be done by investing time, effort, and resources in changing the cultures and practices of extension and education systems, and are likely to yield results over a much longer-term period. However, without such changes, the extension and education system in Ethiopia will become increasingly irrelevant to the needs of intensive, commercial smallholder production systems.

In conclusion, many of Ethiopia's state-led policies put in place to promote cereal intensification and smallholder commercialization need to be reconsidered. A rethinking of approaches is desirable, one that systematically and courageously explores the reallocation of the roles of the public and private sectors in the country's agricultural input, extension, and education systems. This rethinking requires a nuanced understanding of the complex issues involved,

However, the rule of law has become more stringent in recent times, coinciding with the new uniform process of the registration of individual parcels of land. Land administration in China varies across the country, and the registration of the individual parcels of land can be seen as one of the new processes being tried out. One issue that may be an obstacle in studying Chinese land holding rights is the fact that the result of some of the studies carried out by the state have not been shared with the public.

The process of scaling up in the Chinese landscape has been buttressed by the irrigation of landholdings in China. Consequently although the holdings in Ethiopia are larger than China, the latter produces more and can sell terms of use (in years). Dr Bruce added that land tenure systems should not be entrenched in the constitution because this reduces the dynamism of the process. The certification system currently being instituted has a psychological importance because it creates a sense of ownership. The focus has usually been on the economy of production. However the economies of process should not be neglected. Holdings efficiency studies have shown that in some cases smaller holdings are more efficient because they are more intensive.

Dr Bruce ended his response by depicting the changes in agrarian policies in China. The “great leap forward” was a failure in China because although rural industrialization worked well in the late 1970's, the breakup of the massive communes and the consequent absorption into township-village industries was an inefficient process. These new structures were public, but with the failure of some of these constructs, some were privatized. The final result was a mixed setup in the approach towards land ownership.

The conference continued with a presentation by Dr Zongmin Li, who presented her paper on “Gender and Land: A Comparative Perspective for Ethiopia.” She stated that the gender dimension in relation to land policies is especially pertinent because worldwide women own 1% of land, but 50% of the labor on land is carried out by them. Increased urbanization often increases the burden on

women because with the departure of men to the urban centers, the brunt of agricultural work falls on the women. There are three arguments in relation to increasing women's ability to have a stronger position in land ownership and productivity. Increased secure access to land could lead to increases in investment. The identification that women are more likely to invest in welfare implies that women are the cornerstones for household growth. This links to the third argument that women's empowerment can further augment this process. However, there are some holes in these arguments. Firstly, households are often presented as a singular decision making unit, which does not reflect reality. The lack of recognition of the different actors in the household decision making process is reflected in the certification/registration process which only identifies one property rights holder. This need to diversify the identification process goes hand in hand with the need to diversify the process of land reform which should be contextualized alongside other processes.

Land distribution to households in China was gender neutral, and in some areas the number of labor force was counted. However, the frequency of distribution was often harsh. The previously mentioned lack of respect of law in Chinese history was also reflected in the lack of enforcement of legal provisions. One issue that needs to be addressed is the ability of future generations to inherit from women, which is also applicable to the process of land policy in Ethiopia.

The discussant for this paper was Dr. Yigremew Adal. He began by presenting the Ethiopia landholding schemes in relation to women. The Ethiopian land distribution scheme was based on head counts. Therefore family size was taken into consideration. Land registration is still household based although allocations can be individually based. The inheritability of land via women is still problematic because access to land is residence based. Consequently when a woman marries and moves to her husband's residence she will lose the rights to her former residence (this system is also present in China.) The patriarchal system is also reflected in the lack of legal pro-

and gear up their capacity to contend with competition from private input suppliers. Even a one-year decrease in the availability of inputs and extension services would likely have severe effects on agricultural growth and the wider economy. For so many reasons, this scenario is an unlikely one.

Scenario 3: "The slow (gradual or measured) fix." Assume a scenario in which similar reforms are implemented over a longer time horizon, say, 5-7 years, with a slightly more interventionist role from the state. In the seed sector, this process would involve the privatization of the ESE under terms that maintains its production capacity for the 5-7 year period. It would also involve introduction of reforms in the state's seed procurement policies to bring pricing into closer alignment with market signals, to encourage procurement from competitive bidders, and improve the enabling environment for both of private seed production and retailing. In the fertilizer sector, this scenario would likely focus on re-opening the fertilizer sector to private companies and introducing policies designed to reduce and equalize collateral requirements across for all market agents, reduce the requirements on lot sizes, and encourage private investment through to the retailing level.

The rural credit system might similarly open up with policies designed to encourage lending to smallholders by private banks, cooperative banks, large savings and credit associations, and micro-finance institutions. This would increase the number of players in the sector, diversify the types of financial products on offer, and introduce competitive rates and other loan terms. While state guarantees might not be withdrawn immediately, the possibility of providing guarantees (or other incentives) at levels less than 100 percent to a larger number of players in the rural credit system might be considered.

Making these types of medium-term reforms work would also require changes in public policies designed to encourage lending. At present, few private banks lend to seed producers without 100 percent collateralization from non-agricultural assets. Yet there is

absence of any significant level of investment in evaluating the impact of the GoE's current investments in seed, fertilizer, credit, extension, and education. Were the GoE to invest more in impact evaluation, a better assessment of the status quo might be possible. This is a non-trivial concern because, in spite of the critical evidence presented above, there is strong support for the status quo within the GoE and the donor community.

Scenario 2: "The lighting fix." While structural adjustment programs have lost favor among both developing-country governments and multilateral finance institutions, it is still useful to consider a scenario in which far-reaching structural reforms are introduced rapidly into the Ethiopian economy. Consider, for example, a scenario in which the ESE was privatized, preferential treatment of state-supported fertilizer and credit suppliers was withdrawn, and regional extension programs were encouraged to source inputs from competitive bidders while also competing against private retailers at the local level.

The most likely outcome of a rapidly implemented reform program along these lines would be short-term disarray. ESE's capacity to produce seed during a transition into privatization could drop dramatically, while private seed producers, aiming to fill the gap, would struggle to expand into varietal improvement activities, scale up multiplication, secure procurement contracts with regional bureaus of agriculture, and build their own distribution networks. Although the fertilizer sector might fare better with private importers and distributors entering the market fairly quickly, the pressure on foreign exchange reserves could be significant, judging from recent and analogous experiences with cement imports. Credit providers, already saddled with bad loans, would likely pursue low-risk portfolio strategies in response to reforms, effectively choking off credit to many smallholders.

Meanwhile, regional bureaus of agriculture would have to reorganize their entire administrative structure to introduce competitive bidding, ensure timely input procurement from private suppliers,

visions that address issues that affect women. Although redistribution has increased the number of women owning land the number of women with the necessary skills to utilize that land are still few in number.

Discussion continued with a participant stating that that women's situations in the land redistribution scheme is varied and diverse. The specific nature of women's landowner rights is especially exhibited at the local level, where cultural and traditional influences may be a stronger force than law. The effects of redistribution of land on women may also be over exaggerated because the lack of skill among women may lead them to seek out shareholding schemes in the search of cultivators. Dr Li responded that enhancing women's skills in the agricultural sector should happen in coalescence with increased abilities to transfer to non agricultural sectors, especially in consideration of the high level of saturation of the agricultural sector.

The third presentation was given by David J. Spielman and Alemayehu Seyoum on "Economic growth in Ethiopia: Perspectives on Agricultural Productivity, Growth and Input Markets." The presenters began by stating that the idea of reform assumes change, consequently there needs to be an assessment of the current state of agrarian affairs, and how to increase productivity in the sector. The analysis focused on cereal production and whether yield or acreage was the crucial source of growth. Another area of analysis was whether real prices matter, and the effects of crop diversification and specialization. The results showed that there was wide variability between output, acreage, yield and growth. Acreage expansion originated the bulk of the influence on growth. Teff was found to be the outlier, with yield contributing more to growth than acreage. One area of concern was the quality of available data, for example the number of tractors in the sector has not changed in 7 years.

Programs to increase yield have had a proven impact in moisture reliable areas. Fertilizers, improved seeds, and irrigated water were found to be codependent factors in the attempt to increase yield. In

terms of seed production, the hybrid maize seed production is the core of seed cooperation in Ethiopia because it funds the distribution of all other seeds. Consequently, hybrid maize is a lucrative business providing potential opportunities to move from public to private production. This in turn would diversify procurement opportunities allowing different regions to get seeds from private groups. The regulation of these potential enterprises would be further aided by the effective patent laws which were instituted in 2006.

In terms of fertilizers Ethiopia spends 50 million on agricultural extension programs, which are now training 55,000 development agents. Three trainers will be dispersed to each kebele in order to carry out further training exercises. The development agents are responsible for the yield return of their kebelles and have additional responsibilities such as credit collection. There are two problems identified in this program, the numerous duties of the development agents can be seen as added stress, and the packages offered by the extension programs are too limited i.e. selected seeds and selected fertilizers. General recommendations included the need to realize quick fixes do not necessarily lead to private sector response, and that a “slow fix” targeting public and private institutions should be considered. The introduction of commodities exchange as well as the spread of ICT’s are good developments that would aid the process of increasing efficiency

The discussant for this paper was Dr Demiss Chanyalew. He began by stating that growth and productivity are not the same thing. There is also a difference in measuring growth and measuring the growth of productivity. This coincides with the ability to view the agricultural sector as the agricultural industry, which includes sectors from food processing to agro business. The discussant suggested that it is not necessary to look outside the country for comparisons, since there are extensive regional variations within the country. He also added that the growth rate of the population, and the degradation of natural resources are some important issues that should be considered alongside yield. The reduction of small holders and the

my. Kassa (2004a 2004b) argues that the agricultural education system suffers from weak linkages with research institutes, and extension services to meet the nation’s development objectives. Gebremedhin et al. (2006) argue that the relationships between research, extension, and education at the *woreda* level are largely top-down, supply-driven, and unimodal, thus impeding the capacity of farmers to innovate and engage in the growing commercial economy.

These issues immediately translate into on-the-ground problems for the GoE’s cereal intensification efforts. Extension agents are expected to promote yield-enhancing technologies, support community mobilization efforts, connect farmers to market opportunities and commercial agents, and train farmers in cooperative management and bookkeeping. Yet few have received training opportunities to adequately develop their potential in these areas, each of which requires a separate set of expertise and a high degree of innovative capacity, i.e., the capacity to adapt classroom information into knowledge that is useful in diverse real-world contexts. A new strategic document yet to be made public is claimed to recognize some of these difficulties and identifies ways of addressing them.

4. Forward-Looking Scenarios and Conclusions

Given the evidence provided above, the question here is what types of institutional and organizational innovations are needed to improve the effectiveness of agricultural input, extension, and education systems in a manner that stimulates agricultural productivity growth, smallholder commercialization, and rural livelihood improvement. To be sure, no quick solutions exist. We examine several possible scenarios here. Note, however, that these scenarios are speculative.

Scenario 1: “Status quo.” Given the evidence above, it would seem that the status quo is insufficient if smallholder commercialization and agricultural growth are to be accelerated. However, the impact of the status quo is yet to be fully assessed, largely due to the

farming equipment, and other technologies, it is the ATVET system that prepares the cadres of extension agents that will move these technologies off the shelf and into farmers' fields. At present, these 25 ATVET colleges are charged with training/retraining the 65,000 extension agents included under the GoE's latest extension program. While the majority of these extension agents will be deployed to the regional extensions systems (and ultimately posted to *kebele*-level FTCs), there is also some demand for their services from the private sector and civil society, for example, the rapidly-expanding horticulture sector.

Unfortunately, the demands of the GOE's latest extension program have strained the capacity of the ATVETs to provide appropriate and effective training (Davis et al. 2007). Resources allocated to many ATVETs are insufficient to conduct practical education (including training on tractors, combine harvesters, or other machinery, and experimentation with plant and animal breeding materials); to assist students in undertaking practical attachments (by covering their travel and living expenses during long-term attachments in the private sector or with public extension services); and to appoint qualified B.Sc.-level instructors with sufficient experience and practical training.

Moreover, ATVETs continue to depend on very traditional educational approaches and learning philosophies that revolve around conventional modalities of instruction, make limited use of modern educational infrastructure or equipment, and provide professionals and graduates with a relative small set of technical skills and abilities. Lectures and materials are often in English, although students' command of the language is usually quite limited. And curriculum content tends to overlook the importance of creating opportunities for students to build practical skills in decision-making, creative thinking, problem solving, and independent thought (Davis et al. 2007).

Critics also claim that the agricultural education system is too isolated to contribute effectively to Ethiopia's changing rural econo-

my affect of increased usages of inorganic material should also be addressed.

Discussions began with a participant stating that the expansion of the urban sector should be a major environmental concern. The issue of environmental impact has been lacking in the presentations. The participant also asked for a definitive description of the term agrarian reform. A second participant stated that livestock production has also been ignored in presentation, and asked the presenters whether they support the regulation of private industries in order to avoid unethical activities. Dr. Seyoum responded that natural resource management is an important issue. In terms of private industries, many corporation dealing with seed management were dismantled by structural adjustment programs (SAP). Ultimately, privatization does not necessitate deregulation, therefore there should be an oversight mechanism for the industry.

Comparing Land Reform in China and Ethiopia:

Rights, Organization and Context

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Introduction

There are substantial similarities between the land reform paths and structures of China and Ethiopia, and both countries are noted, in their regions, for their small and often fragmented farm holdings. These similarities, together with a sense that the reform model has delivered stronger productivity impacts in China than in Ethiopia, have prompted this paper. It examines similarities and differences between the two land reform experiences, and asks whether these comparisons suggest any points that can inform future planning for Ethiopia's land sector.

The paper begins with a description of the Chinese experience, which is set out in terms of the current position but also reviews very recent reforms that for the most part have yet to be implemented but point clearly to the shape of the future. The paper gives a sense of the process by which land tenure reform has progressed in China, which is perhaps as interesting as the substance of the reforms. There follows a description of the recent experience with reform of land tenure in Ethiopia, focused on the reforms of the Derg and subsequent governments. This paper was presented to an Ethiopian audience, and so the treatment of the Ethiopian experience is less detailed than that of China.

The paper then suggests some similarities and differences between rights, reform institutions and reform processes in the two countries, as well as the economic and legal contexts in which the reforms have taken place. Finally it raises some broader issues of economic context for consideration by those concerned with Ethiopian land policy and reform processes.

The Chinese Experience

(Gebremedehin et al. 2006). Farming communities do not participate in extension planning, and extension agents remain largely conveyors of technical messages, rather than active facilitators of community capacity building and providers of relevant information (EEA/EEPRI 2006). And continued imposition of targets from above and weak local capacity have not yet permitted the emergence of a dynamic, demand-driven system.

Several changes have been introduced to address these deficiencies. To get beyond a focus on cereals, packages have also been developed to support other crop and livestock enterprises, improve post-harvest technology, and encourage natural resource management. Recognizing the diversity of smallholder farming systems in Ethiopia, classifications have been developed to divide the country into several distinct agro-ecological zones, which have been used in the development of more appropriate zone-specific packages (Ibrahim 2004). And input distribution is being shifted away from extension to input supply offices and cooperatives. But a wide range of critics still argue that extension's impact in Ethiopia has been severely constrained by competing responsibilities placed on extension agents, by their entrenched routines and behaviors, and by a myopic emphasis on output figures.

Agricultural education and training. Ethiopia is host to some of Africa's oldest institutes of higher learning that focus specifically on the agricultural sciences. The country's formal agricultural education system currently consists of seven institutes of higher learning in the field of agriculture and 25 agricultural technical and vocational education and training (ATVET) colleges, all funded and managed by the federal and/or regional governments. This system is complemented by a sizable public agricultural research system led by the Ethiopian Institute of Agricultural Research (EIAR), and complemented by seven regional agricultural research institutes.

While Ethiopia's cereal intensification efforts are closely tied to the ability of higher learning institutes and the research system to develop new and appropriate plant varieties, production techniques,

new extension agents (along with 15,000 existing agents) have been inducted into training programs and are being deployed throughout the country, thus expanding the size of the public extension staff four fold.

In addition, Farmer Training Centers (FTCs) are being constructed in each *kebele*, and the total number of FTCs was expected to have reached 18,000 by the end of 2008. The FTCs are designed as local-level focal points for farmers to receive information, training, demonstrations, and advice, and include both classroom and demonstration fields. Each FTC will be staffed by three DAs (one each in the areas of crops, livestock, and natural resource management) and supported by a peripatetic DA covering several FTCs and trained in cooperatives management or a related field. Each DA is expected to train 120 farmers per year in his/her field of specialization through a broad range of demand-responsive extension and short-term training services.

These programs represent a significant public investment in extension in Ethiopia, amounting to over \$50 million dollars annually, or almost 2 percent of agricultural GDP. Yet in spite of this, there has been surprisingly little evaluation of the program's impacts. The few surveys that do exist suggest mixed results. Although many farmers initially adopted the packages promoted by the extension system, up to a third of the farmers who have tried a package had discontinued its use; while poor extension services were ranked as the top reason for non-adoption (Bonger et al. 2004; EEA/EEPRI 2006). Moreover, extension effectiveness in Ethiopia continues to be measured in terms of targets for physical input use, at the cost of emphasizing the efficiency and profitability of input use. In fact, most extension workers view their role primarily as distributing seed, fertilizer and credit packages, which hampers the provision of technical advice (EEA/EEPRI 2006).

The hierarchical "culture" underlying the extension system does little to encourage and exploit the inherent resourcefulness of those who work closely with farmers and rural communities

While rural land in China is owned by rural collectives, urban land is state-owned. This duality in China's land tenure system goes back to the early days of communist rule. While rural land has long been kept largely outside the market economy, urban land has been made available to user households and enterprises (public and private) under very long-term use rights against a single up-front payment. This system has been relatively stable, with a gradual progression toward stronger and longer user rights and liberalization on rules governing transfer of the rights.

For rural land, however, the reform path has involved important reversals of direction. A brief land to the tiller phase after the Communist Party achieved power in 1949 was followed by the creation of production cooperatives beginning in 1956 and then in 1958 by a dramatic scaling up to massive communes. The collectivization of agriculture may have had certain initial advantages, but it ultimately proved incapable of fostering agricultural productivity comparable with that of the "Asian tigers" such as Taiwan and South Korea. China began to abandon collective production in the mid-1970s in a reform process that began with local experimentation at Fenyang County in poverty-ridden Anhui Province, ultimately returning land to family farming. Households took small (and often fragmented) holdings on contract from rural collectives, former production teams. Decollectivization of agriculture was endorsed by the 1978 Plenum of the 11th Central Committee of the Communist Party, and during the early 1980s the communes were broken up (Ho 2005). Experiments at country and township level with different models for post-collective agriculture continued through the 1980s (Bruce and Harrell 1989) and even into the 1990s (Prosterman and Bledsoe 2000).

The new system came to be known as the Household Responsibility System (HRS). Land was owned by the rural collective. Land other than that needed for public purposes was allocated to households and public enterprises. Annual land contracts with farmers were conditioned upon production of specific amounts of staple crops

for sale to the state at fixed prices. Crops produced over these quotas could be sold on the open market, as could crops not covered by quotas. Periodic redistributions of farmland (referred to as “adjustments”) were frequent, usually on local initiative but sometimes to accommodate government projects which needed land. The redistributions were done to preserve equality in land distribution among households, but other factors were in play as well: a desire on the part of government to prevent development of too strong a sense of land proprietorship on the part of farmers, and on the part of collective cadres, by a desire to take advantage of the considerable rent-seeking opportunities such redistributions offered (Wang 2005, Rozelle et al. 2005).

The fundamentals of the new land tenure system were confirmed in law for the first time in the 1987 Land Administration Law (also translated as the Land Management Law). This was the first comprehensive land administration law for China; it is worth noting that up to this point, the reform process has been a matter of party directives and administrative instructions, without a legal framework. It was enacted at a point in time when most agricultural land had been de-collectivized and was being operated as household farms. It has been amended repeatedly, most recently in 1999. In 2003, a watershed Rural Land Contracting Law was enacted to supplement the Land Administration Law, followed by a new Property Law in 2007 and then announcement of a set of new property rights policy initiatives in October 2008. The 2003 law and the 2007 law have not been fully implemented, and implementation of the 2008 policy changes still need to find expression in law and regulations. To keep close to the reality today, this paper first describes the position prior to the most recent reforms of 2007-08, which approximates the situation on the ground today, and then discusses the recent reforms and prospects for their implementation.

institutions (MFIs) and one cooperative bank. Cooperatives have gradually assumed part of the guaranteed credit program, which had reached some four million farmers with guaranteed credit of nearly \$70 million in recent years. The financial products on offer, and their associated interest rates, are generally limited to seed and fertilizer purchases, animal fattening, beekeeping, and several other “recognized” investments.

Loan recovery, using extension agents and a degree of coercion by local administrative officials, was generally successful until the collapse of maize prices in 2001 and the subsequent drought. In Oromiya Region, for example, recoveries had averaged above 80 percent up to 2001, but this figure dropped to 60 percent in 2002, forcing a major rescheduling of loans. This has resulted in high fiscal costs and fiscal risks associated with the loan guarantee program. The write-off to loan guarantees amounted to Ethiopian birr (ETB) 84 million in 2001, but by 2005 liabilities had again accumulated to ETB 183 million (DSA 2006). Also in 2005, the Oromiya Region was obliged to pay approximately ETB 84 million to the Commercial Bank of Ethiopia to honor its guarantees for the previous 3-year time period. The guarantee thus becomes a subsidy that is not accounted for in government budgeting.

As in the seed and fertilizer markets, the evidence suggests that current credit distribution system is increasingly ineffective and fiscally unsustainable in the long run. Moreover, the continued dependence on public guarantees and write-offs, below-market interest rates, and loan recovery by public extension agents and local administration is likely to hinder the emergence of competitive financial institutions in rural areas.

Agricultural extension and advisory services. Agricultural extension in Ethiopia have traditionally been financed and provided almost entirely by the public sector. The current program has expanded extension’s coverage in Ethiopia and claims to reach around four million farmers (EEA/EEPRI, 2006). It is expected that this coverage will increase further: Since 2004, some 50,000

stronger competitiveness policies to revitalize private investment in importing, wholesaling and retailing fertilizer.

Table 16. Comparison of modern varieties (MVs) and fertilizer use among different countries and regions, 1997-2002

Country/region	Area under wheat MVs (% of area) ^a			Area under maize MVs (% of area) ^b			Fertilizer usage (kg/ha of arable and permanent cropland) ^c		
	1997	2002	2006	1997	1999	2006	1997	1999	2002
Ethiopia	51	65	--	5	15	20	13	16	14
Eastern/Southern Africa	66	87	--	46	72	47	13	13	15
Western/Central Africa	99	--	--	38	--	--	2	3	3
South Asia	92	94	96	48	46	70	99	110	101

^a Denotes the proportion of total wheat cultivation area that is cultivated with improved (semi-dwarf) wheat varieties. Sources: for 1997; Pingali 1999; for all other years, De Groot, pers. comm. 2007.

^b Denotes the proportion of total maize cultivation area that is cultivated with improved maize hybrids or improved openly-pollinated varieties. Sources: for maize in Ethiopia, CSA (2006, 2004, 2001), FDRE 2004; all other countries, De Groot, pers. comm. 2007.

^c Source: FAOSTAT 2005.

Rural credit services. However, seed and fertilizer are only part of the story, as their purchase is inextricably linked to the availability of rural credit. Beginning in 1994, regional governments in Ethiopia used a 100 percent credit guarantee scheme to stimulate the uptake of the PADETES improved seed-fertilizer packages. Under this system, about 90 percent of fertilizer is delivered on credit at below-market interest rates, displacing what had largely been retail sales from the private sector (including a substantial share on cash basis). In order to finance the packages, credit is extended to farmers by the state-owned Commercial Bank of Ethiopia, through cooperatives, local government offices, and more recently, microfinance

Rural Land in China

A collective's rural land typically exists in three categories: residential land, farmland, and construction land. Rural homes are privately owned by households, and can be bought, sold and inherited, though the land on which they stand remains owned by the collective. It is obtained without charge by residents and is not generally transacted, though it may be inherited with a house if the heir is a resident of the collective. This is the most secure tenure niche in rural China, as the term is indefinite. Farmland is held by households under long-term use contracts which may involve relatively modest use charges, which can be inherited by resident heirs and which can be sub-leased but not otherwise transferred. Construction land is likewise held by individuals and public and private enterprises on long-term contracts, at more significant use charges which better reflect market values; in this case there is great variability among the contracts within and among communities. Finally, some communities possess a modest amount of land held in reserve, and this may be leased out at the discretion of village officials. One can find variations among communities, but this is the broad pattern (Wang 2005).

Tenure to users of farmland in the villages is provided largely through contracts from the village executive committee or economic cooperative. Restrictions on crops grown and quotas have been gradually phased out. The government gradually encouraged (but at first did not require) longer contract terms to provide greater security of tenure to rural households, and began to discourage frequent periodic redistributions of land among members.

Rapid agricultural development as the result of the introduction of the Household Responsibility System reforms was reflected in substantial decreases in absolute poverty and continued rural income growth after 1987. These were due to the return to family farming, and occurred in spite of the fact that families enjoyed very limited tenure security in their holdings. The initial impact of the reforms seemed to have played out by the end of the 1990s. Urban

incomes grew faster than those in rural areas, leading to an ever widening gap between urban and rural incomes. This led to further reforms, this time focusing on increasing security to tenure in farmland. Policy discourse about land in China has since that time focused on how rapidly China can or should move toward robust private rights in land and the relative merits of market or administrative allocation of land (Carter and Yao 2005).

Amendments to the original Land Administration Law, the most recent in 1999, provide for issuance of certification and registration of land rights of rural collectives; for users of rural land for non-agricultural purposes; and for users of state-owned land in urban and other contexts. They require registration of changes in ownership and use of land and buildings. There are also provisions for administrative settlement of land disputes, overall land use planning, the establishment of a land survey system, and the establishment of a land statistics system.

The 1999 amendments required a minimum term of thirty years for farmland and longer terms, up to 70 years, are available for specialized uses, such as forestry/agroforestry on hillside lands and for some construction projects.

The provisions of the Land Administration Law on contracting of farmland were sketchy and further and more specific reforms were introduced by enactment of a Rural Land Contracting Law (RLCL) in 2002, effective March 1, 2003. It does not replace the Land Administration Law, but supplements it. The law confirms a number of administrative orders that had strengthened the use rights of rural land users. The land use contracts must be for thirty years for arable land, thirty to fifty years for grassland, and thirty to seventy years for forest land. They must be in writing and signed by both parties. Readjustments are restricted by the new law. Land is not to be readjusted (redistributed by the collective) during the contract term, except if this is required by a natural disaster and or “other special circumstances” (not specified). Any readjustment during the term of the contract must be approved by two-thirds of the members of the

Difficulties are also evident in the estimation of demand and the distribution of fertilizer. Estimates of demand are compiled through official channels and aggregated to the national level as in the case of seed. Importers respond to official demand estimates and organize distribution through the regional bureaus of agriculture or cooperatives, depending on the region (DSA 2006). This process, as with the importation process, tends to favor those firms or organizations with access to capital markets and with experience in navigating the regulatory and administrative systems at both the federal and regional levels.

What is the ultimate outcome of these successive transformations of the fertilizer sector? Although fertilizer consumption in Ethiopia increased in absolute terms from 250,000 tons in 1995 to more than 400,000 tons of product in 2007/08, and although the growth of total fertilizer consumption was more rapid than the average for Sub-Saharan Africa over the same period, the *application of fertilizer per hectare* is similar to the average for eastern and southern Africa—an average that is well below comparable rates of application in other developing countries (Table 16; Crawford et al. 2006; Jayne et al. 2003).

Furthermore, growth in fertilizer consumption *per hectare* has increased only marginally over the past decade. Despite the huge demonstration programs, only 37 percent of farmers were using inorganic fertilizer, and application rates remained at around 16 kg/ha of nutrients (about 33 kg/ha of commercial product). There is also substantial evidence suggesting that many farmers have dis-adopted the seed-fertilizer technology packages over time (e.g. EEA/EEPRI 2006) due to cost, unavailability of preferred traits/varieties and other inputs from suppliers, a preference for local varieties, or other such factors.

Both the exit of private firms, the rise of party-affiliated companies, and the entry of cooperative unions are widely perceived as reflecting the lack of a level playing field in the fertilizer sector (Jayne et al. 2001). This suggests the need for further measures to introduce

Fertilizer importation, wholesaling, and retailing. Interestingly, Ethiopia's experiences in the fertilizer sector provide some lessons on what might be possible in the seed sector with liberalization of prices, removal of state subsidies, dismantling of state monopolies, and encouragement of private investment. By 1996, the introduction of such policies opened up the fertilizer market substantially, encouraging several private firms to import fertilizer, and creating opportunities for the entry of 67 private wholesalers and 2,300 retailers, representing a significant share of the domestic market.

However, since 1999, this lesson-learning opportunity disappeared as the independent private sector exited the fertilizer market. In the case of imports, the share of private firms operating in the market dropped from 33 percent in 1995 to 0 in 1999. Since then, the Agricultural Input Supply Enterprise (AISE) has taken the majority share, followed by companies closely affiliated with, or owned by, the ruling front, and more recently, cooperative unions. Experiences in the wholesale and retail ends of the market were similar: As of 2004, the public sector accounted for over 70 percent of distribution, with private dealers accounting for only 7 percent of sales nationwide (DSA 2006; EEA/EEPRI 2006). Since 2005, while the share of party-affiliated companies has declined in all of these markets, cooperative unions have taken up the slack in importation, wholesaling, and retailing. Ultimately, the GoE expects the cooperative unions and their member cooperatives to manage the lion's share of fertilizer distribution in the future.

The decline in private sector participation in fertilizer markets reflects several factors, including difficulties in the import process itself. Importing fertilizer requires that the importer obtain a license that is allocated by the GoE through a tendering process, and requires that fertilizer be imported in lots of 25,000 tons. The importer almost always requires financing given the sheer size of single shipment: Yet while a private sector buyer is required to deposit 100 percent of the value of the fertilizer consignment at the time a credit line is opened.

village assembly or two-thirds of the villager representatives. The village may maintain a part of its land in a flexible reserve to adjust landholdings for newly added population of the village, and may also use reclaimed land and land returned voluntarily by contracting parties for this purpose. The contacted land use rights are now clearly inheritable during their terms, a major change.

The township government is responsible for rural land contracting and contract management within its administrative jurisdiction and often provides the needed forms and instructions. The contracts are effective when concluded but are required to be registered. The county or higher level of government is required to issue to user a land contracting and operation certificate, and to register the contract. Fees are not to be collected beyond what is necessary to cover the cost of the certificate.

While the collective cannot normally take back the land during the contract term, the growing urbanization and its impacts are recognized. Where the land user moves to a small township, the user can retain his use right, but if the user moves to a city and changes his/her household registration to non-agricultural, s/he must surrender the contacted land. In that case compensation is to be paid for investments on the contracted land. The Rural Land Contracting Law confirms the right of the holder of the use right to transfer (assign), lease, exchange, or otherwise engage in transactions regarding the use right. For assignments and exchanges the permission of the collective must be sought, but for other transactions the collective must only be notified. The transaction must be made in writing if it is for more than a year, and must be registered. If it is not registered, the rights are subject to the good faith claims of a third party.

A collective may contract rural land to a unit or individual outside the collective, but only with the approval of two-thirds of the villager assembly or two-thirds of the village representatives as well as the approval of the township government. Provision is made by the RLCL for mediation and arbitration of disputes concerning

contracts and for ultimate recourse to the courts, and for civil and criminal liability for officials and others who violate the procedures required by the Law or the rights of land users under the Law. The new law went into force on March 1, 2003.

Studies suggest that implementation of the reforms is still very uneven (Prosterman et al. 2000, Prosterman et al. 2004). Advocates of stronger rural land rights have continued to assert the need for greater security and marketability of rights in farmlands, to allow them to gradually achieve a market-determined value, thereby eliminating the strong duality that now exists between rights in rural and urban land.

Urban Land in China

Urban land in China is owned by the state, but its management has been progressively delegated to provincial and municipal governments, who allocate this land to users on long-term use rights (often referred to as leases). By the mid-1990s central government approval for allocations of public land were only needed for very large areas of land, the area differing depending on the nature of the land use. Central government retained the authority to retrieve public land from local governments for major investment projects of national interest. But otherwise, local government units have had full management of public land within their boundaries.

As in rural areas, the ownership of land and the ownership of buildings are separate in Chinese law. Buildings may be privately owned, but the land on which they stand is owned by the state and made available on contract from the municipality. Holders of urban land have long-term use rights and pay a single, up-front charge when receiving the right to use the land. This pattern was set by the early 1950s. The statutory term of these use rights has regularly been extended, and the right has been freely transferable since a 1988 constitutional amendment allowing transfer of land use rights where provided by law, and a corresponding amendment of Art. 43 of the Land Administration Law, followed by issuance of regula-

Several private investors, including Pioneer Hi-Bred International and a handful of domestic companies, are demonstrating this with their own hybrid maize production lines that are highly competitive with the ESE. Production cost data even suggest that at least one private company can produce hybrid maize seed for 32 percent of ESE's costs (Alemu et al. 2007). However, their successes are generally reliant on distribution systems that directly supply through regional bureaus of agriculture, or provide coverage of relatively small, localized markets. Moreover, in 2004, their share of the market represented less than 26 percent of the entire hybrid maize seed market, and most of their customers were themselves public entities. In reality, only eight firms are actively engaged in the seed market, primarily as sub-contractors to ESE (Alemu et al. 2007). Thus, ESE still represents the main player in the market as the key purchaser of hybrid maize seed from private seed producers, and as the key supplier to regional extension programs, cooperatives, international aid agencies, state farms, and commercial farms.

Table 15. Hybrid maize seed production by company, 2004

Company	Amount produced (quintals)	Percent of total hybrid supply
ESE	52,105	70.0
Pioneer Hi-Bred	12,000	16.1
Hawas Agro Business	180	0.2
Awassa Farm Development Enterprise	962	1.3
Awassa Green Wood	3,500	4.7
Hadiya Trading Enterprise	1,100	1.5
Bako Agricultural Research Center	3,162	4.2
Ano Agro Industry	612	0.8
Anger Farm	842	1.1
Total	74,463	100.0

Source: FDRE, 2005.

began to fall short of official estimates of demand (e.g., a 73 percent shortfall in 2004/05). Limited production capacity at the state-owned Ethiopian Seed Enterprise (ESE), combined with insufficient provision of basic seed from the research system, contributed much to these shortfalls. These problems are further compounded by shortcomings in seed quality and timeliness of delivery (see Sahlu and Kahsay 2002; DSA 2006; EEA/EEPRI 2006). This is true whether seed is distributed through regional extension programs or, as is increasingly the case, through cooperative unions and their member cooperatives.¹⁰

Even with policies favorable to private sector development (including a plant breeder's act that came into effect in 2006), private investment in Ethiopia's seed market has been severely constrained by several entry barriers. First, private seed companies face high costs associated with building distribution networks that must compete with the state's own distribution system that ties seed with fertilizer and credit (World Bank 2006b). Second, private companies must contend with the similarly high costs of navigating the regulatory system, accessing financing from the formal banking sector, and meeting stringent collateral requirements. Third, private investment has also been thwarted by relatively low nominal prices for seed sold by ESE, despite the possibility of bringing these prices into closer alignment with international benchmarks that price hybrid seed at about a 10:1 ratio over the grain price (versus the 5:1 used in Ethiopia).

In spite of these constraints, private investment in Ethiopia's seed market is slowly emerging, and there are indications that the potential for much larger investment—on the scale of Kenya, Zambia or other eastern and southern African countries—exists (Table 15). This is particularly true for hybrid maize, the biological properties of which make it attractive to private investment, and where experiences from eastern and southern Africa suggest that it is a potentially lucrative product.

tions (May 19, 1990: Interim Regulations on Selling and Assigning of State-owned Urban Land Use Right). These allow “the transfer, lease, mortgaging, inheritance and dealing in the state-owned urban land use right for other economic activities, within its use term.” Municipalities maintain registers of these land use rights.

The longest use right available in urban areas is that for residential land, which is for 70 years. There is an active market in such land rights, and land values have risen dramatically in recent years, with those appreciations in value accruing to the right-holders. This has opened up a major gap between legally recognized values of urban and rural land, with rural land remaining largely outside the market.

In the 1990s, demand for new land for urban uses grew rapidly, in part due to a relaxation of legal restrictions which had partitioned the urban and rural economies into water-tight compartments, including tight restrictions on urban migration. Local government had some public land to reallocate from failed state enterprises, but also began to rapidly expand their borders into rural areas, where land was owned by rural collectives. The growth has been phenomenal, encouraged by cheap land acquisition policies. Local governments acquired land compulsorily at statutorily-specified compensation levels, reflecting agricultural uses and the non-marketability of that land, and then allocated that land at much higher prices to land developers and others for urban uses. This disparity, which is effectively an appropriation by the local government of a legally unrecognized location value in such peri-urban land, has become a source of deep resentment in peri-urban communities facing absorption into municipalities, and has been the occasion of serious demonstrations and their violent repression in many areas of the country. Some wealthy communities began to pay compensation in excess of that required by law, for social peace, but poorer municipalities did not do so and abuses by local officials have been common across the board.

At the same time, however, this strategy generated huge revenues for local governments in areas with strong demand for land. In

1998, central government approved land banking by local governments, in part to take over land of failed state-owned enterprises, but local government quickly learned to use this mechanism for ever more systematic land management, and to acquire rural land for future demand. This decentralized land administration, and the vigor with which local governments seized the opportunities for growth it provided, has driven a huge wave of urban infrastructural development in China's cities. This has been funded to a large extent from land revenues and much of the development has been carried out in partnership with private developers. The results are phenomenal.

By 2004, the central government became increasingly concerned about a number of urban land issues:

1. the tendency of the large revenue stream associated with absorption of rural lands into urban areas to drive urban development outward rather than upward, with serious consequences for maintaining arable land and negative environmental impacts;
2. the lack of an adequate legal framework for compensation for rural land absorbed, and consequent local abuses of the requisition power, which are the source of significant peri-urban unrest and protests in many parts of the country;
3. the lack of controls of the use of the huge off-budget funds provided to local governments by land allocations and the extensive corruption associated with the use of those funds;
4. the practice of some municipalities of using public land in their land banks to secure liberal and in many cases highly questionable loans from other banks (threatening the stability of the banking system), and
5. the excessive dependence by many municipalities on revenue from one-time charges on land at first allocation as urban land, which is likely to prove unsustainable (a real property tax is often discussed as an alternative.)

A key feature of PADETES (and its predecessors such as the National Agricultural Extension Intervention Program (NAEIP)) was the primary role played by the state. Improved seed was developed, multiplied, and distributed by public organizations and agencies, fertilizer was distributed (primarily) through public channels, credit was disbursed through state-guaranteed credit institutions, and extension services were provided by *woreda* (district) bureaus of agriculture.

A decade after PADETES, and in the midst of another state-led cereal intensification program, the Ethiopian economy, and the policies meant to steer the economy to higher growth, has changed. While the extent and depth of this change is a matter of some debate, there are concerns that these programs are not consistently generating the desired impacts (see, e.g., Byerlee et al. 2007; DSA 2006; EEA/EEPRI 2006). Yet agricultural input markets, extension approaches, and agricultural education curricula have changed relatively little in spite of this. The state continues to play a dominant role, and the effectiveness of its interventions is now coming under increasing scrutiny. These realities are discussed below for each major component of the GoE's cereal intensification program—seed, fertilizer, credit, extension, and education.

Seed production and distribution. Ethiopia's cereal intensification programs hinge on the distribution of improved seeds, primarily for crops such as maize and wheat. But adoption of improved seed in Ethiopia has generally been disappointing. Official estimates suggest that while the total quantity of improved seed supplied nationally increased during the PADETES period, farmer use of purchased seed in 2005 covered an average of only 5 percent of cropped area, with a high of 16 percent for maize. Most farmers still rely on farmer-to-farmer exchanges or saved seed, even for improved varieties (Belay 2004) (Table 2).

After an initial boost, production and distribution of improved seed has been stagnant since about 2000. At about this same time, the supply of improved seed channeled through the formal system

3. Agricultural input Markets and systems

This section takes a more in-depth look at the specific issue of agricultural input markets and systems, and their effects on agricultural productivity and growth. The section begins with an overview of cereal intensification efforts in Ethiopia, followed by a discussion of seed, fertilizer, credit, extension, and education.

Cereal intensification efforts. Beginning in the 1990s, the GoE introduced a range of economic reforms that sought to boost agricultural production. A hallmark of this strategy was the introduction of several large-scale programs designed to intensify cereal production through the use of improved seed, chemical fertilizers, and credit. The intensification campaign focused on cereals in the moisture-reliant highlands where 60 percent of the rural population lives and where the strategy had the best chance of success.

The most significant intensification program—the Participatory Demonstration and Training Extension System (PADETES)—was introduced in 1994/95 following a large-scale demonstration program led by Sasakawa Global 2000. Over a 10-year period, PADETES reached about 40 percent of the roughly 10 million farm households in Ethiopia. Data from millions of demonstrations carried out through PADETES (3.6 million in 1999 alone) indicated that the adoption of seed-fertilizer technologies could more than double cereal yields (Table 14) and would be profitable to farmers in moisture-reliant areas (Howard et al. 2003).

Table 14. Yields in on-farm field trials vs. farmers' yields, 2000-2004 (metric tons/hectare)

Crop	NAEIP (1995-1999)		SG2000 (1993-1999)		Current farm yields (2000-04)
	Improved	Traditional	Improved	Traditional	
Maize	4.73	1.57	4.60	1.57	1.82
Wheat	2.93	1.17	2.31	0.95	1.31
Sorghum	2.79	1.12	2.08	0.92	1.21
Teff	1.43	0.85	1.62	0.64	0.82
Barley	2.15	1.00			1.05

^a NAEIP is the National Agricultural Extension Intervention Program. Source: World Bank, 2006a.

The 2007 Property Law

Calls had been heard for some years for a comprehensive revision of the law on property rights, and at the close of the fifth session of the tenth National People's Congress (NPC) on March 16 2007, the Congress enacted into law a comprehensive framework for the protection of real and movable property rights. The new *Property Law* took effect on October 1 2007. It is more important for its content on urban land than on rural land, largely referring to the 2003 Land Contracting Law regarding collective agricultural land.

Several key reforms regarding land use rights are enacted:

1. The Property Law provides for the automatic extension of land use rights for residential urban construction land and this in combination with the law's reiteration of the constitutional right of inheritance, has been read to allow inheritance of the use right.
2. The Property Law confirms, in less ambiguous language than earlier laws, that holders of urban construction land use rights may transfer, exchange, donate or mortgage their rights, or put them up as a capital contribution. Such transactions must be set forth in written contracts, and must be registered with the appropriate registration authority.
3. In its most important provision, the Law provides that where such construction land use rights are recalled by the state prior to the expiry of the term for a public purpose, compensation must be paid for any residences or other improvements on the land, and the transfer fee originally paid for the use rights must be refunded.
4. The above provisions apply to urban construction land, but the law provides that collectively owned construction land remains governed by the Land Administration Law, effectively excluding it from the new reforms.

5. Regarding collective ownership of rural land, the law provides an important clarification of the nature of collective ownership. That land, it specifies, is owned not by the local collective institutions, but is “collectively owned by members of such collective”. This makes it clear that members have a property interest in that ownership, which has, for example, implications for allocation of compensation if such land is requisitioned by the state.

Rural farmland contracts can now be from 30 to 50 years for farmland and 30 to 70 years for forest land.

For the first time, the law establishes national standards for real property registration. The Law requires that the establishment, change, transfer or termination of real property rights be registered to have legal effect, unless otherwise provided by law. The property must be registered with the appropriate registration authority of the area in which the property is located. If errors by the registration authority are found to cause damages, the authority will be required to bear responsibility for compensation and may seek recourse from the individual who caused the error. Regulations will be separately promulgated to govern the registration process and specify the authorities that will be responsible for handling registrations.

The structure of the law itself provided an indication of the reform direction to be followed in the future. Instead of having separate sections on urban and rural land, it provides rules by type of use right (e.g. farmland, construction land, etc.) and makes distinctions within those categories if considered necessary. This seems to suggest an intention to unify the systems in the future.

The October 2008 Central Committee Decisions

On October 12, 2008, the CPC Central Committee approved a broad policy document aimed at a more balanced and integrated rural-urban development. It sets a goal of doubling rural per capita

present exercise. It is thus another area for further investigations. See Taffesse 2008 for further details.

Table 13. Differences in Yield across Periods

Yield	t-test for Equality of Means (Equal variances not assumed)				
	T	P-value (2-tailed)	Mean Difference	Std. Error Difference	Mean Difference as % of reference period's yield
1998/99-2000/01 vs. 2001/02-2004/05					
Barley yield (Quintals/Hectare)	-3.019	0.003	-1.249	0.414	14.0
Maize yield (Quintals/Hectare)	1.235	0.218	0.885	0.717	-5.5
Sorghum yield (Quintals/Hectare)	0.163	0.871	0.107	0.659	-1.0
Teff yield (Quintals/Hectare)	-2.472	0.014	-0.745	0.301	10.3
Wheat yield (Quintals/Hectare)	-1.911	0.057	-1.162	0.608	11.5
1998/99-2000/01 vs. 2005/06-2007/08					
Barley yield (Quintals/Hectare)	-5.597	0.000	-2.280	0.407	25.6
Maize yield (Quintals/Hectare)	-2.784	0.006	-1.901	0.683	11.8
Sorghum yield (Quintals/Hectare)	-2.256	0.025	-1.568	0.695	14.3
Teff yield (Quintals/Hectare)	-5.525	0.000	-1.896	0.343	26.2
Wheat yield (Quintals/Hectare)	-2.925	0.004	-1.941	0.664	19.2
2001/02-2004/05 vs. 2005/06-2007/08					
Barley yield (Quintals/Hectare)	-2.305	0.022	-1.032	0.448	10.1
Maize yield (Quintals/Hectare)	-3.625	0.000	-2.786	0.768	18.3
Sorghum yield (Quintals/Hectare)	-2.153	0.032	-1.675	0.778	15.5
Teff yield (Quintals/Hectare)	-3.107	0.002	-1.151	0.370	14.4
Wheat yield (Quintals/Hectare)	-1.055	0.293	-0.779	0.739	6.9

Note: The annual Agricultural Sample Survey for 2002/03 was not implemented. Thus 2002/03 is not included - i.e., the period 2001/02-2004/05 includes 2001/02, 2003/04, and 2004/05.

Note: The annual Agricultural Sample Survey for 2002/03 was not implemented. Thus 2002/03 is not included - i.e., the period 2001/02-2004/05 includes 2001/02, 2003/04, and 2004/05.

Key observations. While the main message from this decomposition analysis is that further investigations into the origins of output growth are warranted, a few key observations are offered here.

First, with respect to acreage expansion, recall that this expansion continued throughout the period covered. Questions which come to mind, in this regard, include what is the source or supply of land for the expansion and what is the quality of land that is being brought under cultivation via the acreage expansion. These are valid questions in that the spread of cultivation appears to reach rather high fractions of total land area in parts of the country, and in some regions land use share of cereal production is rapidly reaching South Asia levels (see Taffesse (2008)). The sources of acreage expansion and its potential impact, including on other uses of land and consequences thereof, need to be systematically investigated.

Second, significant growth in yields was recorded over time (Table 13). In contrast, tables presented in the introduction of this paper suggest limited change in modern input use. It is thus pertinent to explore further what the sources of the growth in yields were and how they could be enhanced.

Third, with respect to development domains, two main observations are that (a) development domains capture differences in levels or 'states' quite well, and (b) development domains do not appear to be very helpful in analysing growth. There are a number of possible explanations for the latter. First, the specific classification of zones into domains may not capture their differences effectively. This appears the least likely explanation for two reasons. It has been established that the classification adopted capture differences in levels or 'states'. Moreover, alternative classifications did not change the outcome.⁹ The remaining two possible explanations are data problems and weaknesses intrinsic to the domains approach. Discriminating between the two is well beyond the objective of the

incomes by 2020, and includes several major decisions on rural reform and development, with a new land policy at its core. Most importantly, under the new policy,

1. The Decision urges that "existing land contracting relationship shall remain stable and unchanged for a long time", but the precise meaning of this remains under debate. In a recent interview magazine interview, Chen Xiwen (Director of the Central Government Leading Group of Rural Affairs Office) urged in a recent magazine interview (Caijun, Dec. 12, 2008) that "The only option is to implement no readjustment in response to change in household size, and cut off the link between household size change and change in household landholdings. All household land rights acquired through the Rural Land Contracting Law should not be readjusted in the future." Others in government are less open to a perpetual land use right, which they feel would reduce state and collective ownership to a legal technicality, much like the residual interest of the Crown in land at English Law.
2. The Decision goes on to state that "...farmers shall be allowed to transfer, lease, exchange, assign or join as stock shares land contracting and operation rights legally, voluntarily and in return for adequate payment and develop multiple forms of proper scale farming." This is a major reform in the transferability of rural farmland, though mortgaging is still excluded. ('Scale farming' is the term used in China for large-scale farming, and this reference in this context seems to suggest that a decision to rely on market forces to accomplish the scaling-up that is needed due to increased reliance by the rural population on non-agricultural livelihoods.)
3. Market transactions for commercial purposes in collectively owned construction land will now be allowed. This is most important reform item in this package. It is not entirely clear whether it applies to farmers' residential land, but this

is nonetheless a first crack of the state monopoly of the market in land for commercial uses. (Farmland can only be transacted if it is first reclassified as rural construction, and this must be anticipated in the local land use plan.) The marketability of collectively owned construction land has major implications for land requisitioning and compensation for requisitioned land, since this land and the improvements upon it will now have a market value. And the document is explicit that the ultimate objective is a unified market in construction land, whether it is state or collectively owned.

4. Expropriation (requisitioning) of land will only be permitted for public purposes and a market-value based compensation mechanism will be established. The aim is to “gradually narrow the scope of land expropriation”. (This has been announced party policy since 2004, but there was a reaction from provincial and other lower levels of government that caused extended debates. The new Decision seems to come down firmly for the reform.)
5. Plot level land registration and certification will be introduced to grant farmers more tenure security and better protected land use rights, and to facilitate land use right transfer. (The Government has initiated rural land registration pilot. China has 250 million farm households, with each household having on average 5 plots, so nationwide land registration and certification will be a challenge.)
6. Reconfirming that national food security is a priority, the document commits to a stringent ‘farmland protection system’, the system of monitoring and administrative approval for conversion of any farmland to other uses. (Similar declarations in the past have proven less effective than hoped in restraining local officials anxious to absorb new land into their municipalities or provide land to developers.)

The new land policy, together with the Property Law passed in March 2007, reflects China’s intention to gradually narrow the gap

As before, statistically significant difference in the pattern of contributions to revenue growth could not be ascertained across development domains. The opposite is true across time periods, however. A clear dominance of acreage expansions obtained during the first period (1998/99-2000/01). The considerable rise in the contribution of price movements was the major shift during 2001/02-2004/05. In a reversal of outcomes, changes in yield were a positive and considerable (second to price changes) source of revenue growth in the last period (2005/06-2007/08).

Table 12. Median Contributions to Changes in Cereal Revenue by Development Domain and Period (1998/99 – 2007/08)

Development Domain	Period	Change in total area under cereals	Change in cereal yields	Change in the allocation of total area under cereals	Change in the price of cereals	Actual change minus estimated change
HMA, HAP	1998/99-2000/01	58.98	34.39	2.30	22.44	-18.12
	2001/02-2004/05	29.59	0.10	0.94	53.14	16.24
	2005/06-2007/08	17.15	32.71	-0.39	45.68	4.85
HMA, LAP	1998/99-2000/01	61.12	36.45	0.58	-28.55	30.40
	2001/02-2004/05	34.77	-22.94	-0.25	87.15	1.26
	2005/06-2007/08	-0.81	20.64	-1.26	56.56	24.87
LMA, HAP	1998/99-2000/01	56.19	9.86	5.75	26.43	1.77
	2001/02-2004/05	26.54	-12.64	-0.07	87.46	-1.30
	2005/06-2007/08	18.67	34.39	0.14	74.31	-27.51
LMA, LAP	1998/99-2000/01	69.04	18.68	4.29	8.50	-0.51
	2001/02-2004/05	25.96	7.77	-0.09	59.45	6.91
	2005/06-2007/08	19.92	39.03	-0.17	36.95	4.27

Source: Author’s computation using CSA data.

likely to be more prominent when a more inclusive set of crops is considered (if pulses and oil seeds are added, for example).

Table 11. Median Contributions to Changes in Cereal Revenue by Crop and Period

Crop Revenue	Source of Revenue Growth	Period		
		1998/99-2000/01	2001/02-2004/05	2005/06-2007/08
Barley Revenue	Change in crop area	75.89	31.21	43.08
	Change in crop yield	20.99	6.39	24.61
	Change in crop price	7.94	55.66	35.99
Maize Revenue	Change in crop area	72.54	24.99	49.20
	Change in crop yield	29.38	0.48	31.17
	Change in crop price	6.37	53.09	13.23
Sorghum Revenue	Change in crop area	69.65	28.22	40.09
	Change in crop yield	25.06	10.49	34.39
	Change in crop price	5.76	41.30	25.27
Teff Revenue	Change in crop area	58.92	28.04	43.50
	Change in crop yield	42.90	5.69	21.40
	Change in crop price	14.02	47.74	37.00
Wheat Revenue	Change in crop area	64.60	26.35	32.62
	Change in crop yield	41.47	16.29	43.01
	Change in crop price	6.13	53.29	25.79
Total Cereal Revenue	Change in crop total cereal area	60.62	27.98	18.59
	Change in crop yield	19.58	-1.28	34.58
	Change in acreage shares	3.27	0.08	-0.22
	Change in crop price	15.31	64.00	44.62

Source: Author's computation using CSA data.

Note: The annual Agricultural Sample Survey for 2002/03 was not implemented. Thus 2002/03 is not included, i.e., the period 2001/02-2004/05 includes 2001/02, 2003/04, and 2004/05.

between land tenure in the rural and urban sectors. Implementation of the new reforms will require amendments to the Land Administration Law and the Rural Land Contracting Law and implementation is some years away, though in some provinces, such as Guangdong, pilots for sale of collective construction land are already underway with administrative approval. China is moving gradually, sector by sector and use by use, into an era of greater transferability of rural land use rights. Ultimately, it seems clear to the author, an integration of urban and rural land markets is intended. This would allow China's rural people to benefit from the appreciating value of their land, as do urban landholders.

The Pilot for Registration of Household Land Use Rights

Under the 1999 amendments to the Land Administration Law, collective ownership is to be registered. There were large blocks and their registration was fairly manageable, though there were some difficulties with definition of the boundaries between communities, which often ran along hilltops. The extent of efforts at registration of collective rights varied substantially from province to province and county to county, but some provinces are believed to have made very considerable progress, registering most collective ownership.

With the new Property Law of 2007, registration of household parcels became necessary. Government had already launched a registration pilot with FAO support nearly two years earlier (Project TOP/CPR/30088, "Rural Land Registration and Certification Pilot", begun in 2005). The project is led by the Central Government Leading Group of Rural Affairs Office, with participation by the Ministry of Agriculture, the Ministry of Land and Resources and the State Council's Legislative Office. The site selected was two villages in Feidong County of Anhui Province. The project was intended to produce 1) a manual for rural land registration and certification, and 2) a strategy for a nationwide rural land registration and certification program. The pilot was scheduled to end by June 2007, but has been extended. Significant inconsistencies

among the land contracts on record are said to have been a major challenge. A draft strategy document recommends moving forward next to a further pilots at different locations and in different economic environments, including urban pilots (People's Republic of China 2009).

Key Points Concerning the Chinese Reform Experience

China is moving by many small steps but with remarkable consistency toward what is effectively a system of private property in perpetual and marketable land use rights, at the same time retaining the principle of state and collective ownership of land. The process has moved at different rates with regard to residential, construction and farm land. By way of preparation, the country is beginning to build the land administration institutions required for such a large impersonal market in land rights, including a land registration system. Such registration systems are the public infrastructure for the private land market. A key pending objective of reformers is mortgageability of rights in collectively-owned construction and farm land.

Those small steps are not set out in a long-term plan but decided upon in intense negotiations within the party that deal at the same time with other key policy reforms, such as market liberalization, easing of residence controls, the move away from state industrial production, and increasing urbanization. The dialogue on these issues is increasingly a public dialogue, with participants speaking out in public fora and the discussions being affected by popular demands for strengthened property rights. Reforms to date have raised popular expectations of further reform, and there is genuine excitement among the new middle class about enhanced property rights.

At key transition points, China has provided opportunities for and encouraged community-based pilots to test reform ideas, often waiving current law to do so. It has been well served by these experiments. This was true in the development of the Household

As in the case of output growth, it was not possible to detect statistically significant difference in the pattern of contributions to the growth of each crop's revenue.⁸ *Teff* emerged as the exception as before.

In contrast, differences across periods are statistically significant. The only exceptions are yield contributions to the growth in barley revenue, sorghum revenue, and wheat revenue. A closer look at these differences revealed the following. During the first period (1999/2000-2001/02), acreage expansion was the dominant source of change in cereal revenue, followed by yield (Table 11). Price increases became the top contributor to revenue growth in the second period, with acreage change taking second place. Yield improvements played a limited role during this period. The third period was characterised by more mixed outcomes. Increases in acreage generated the largest contribution to revenue growth in the case of barley, maize, sorghum, and *teff*, while yield change did so for wheat revenue. Crop prices also made significant contributions to revenue growth.

Decomposition of Changes in Total Cereal Revenue. Total cereal revenue is calculated as the sum of the value of output of the five cereals covered by the study. As noted above, CPI-deflated real prices are used in computing the value of crop output. Aggregations across crops leads to a fourth source of revenue growth, namely, the share of each crop in total cereal acreage. In other words, change in a specific crop's acreage has two components—one due to change in total acreage and another due to change in its share in total acreage. The results of the decomposition exercise are reported in Table 11 (bottom four rows for periods) and Table 12.

Consistent with previous results, change in total cereal acreage was a primary source of growth in total cereal revenue. That price changes were a competing source in this case is an interesting variation. Moreover, change in allocation of cereal acreage was rather limited and thus did contribute very little to revenue expansion. Its role is

(in fact, price and acreage contribute equally to *teff* revenue growth).

Table 10: Median Contributions to Changes in Cereal Revenue by Crop and Development Domain, All Periods (1998/99 – 2007/08)

Development Domain	Crop	Change in crop area	Change in crop yield	Change in crop price	Actual Change minus Estimated Change
LMA, LAP	Barley	54.6	14.7	20.5	10.2
LMA, HAP	Barley	38.4	13.1	37.6	10.9
HMA, LAP	Barley	54.6	21.3	28.5	-4.4
HMA, HAP	Barley	53.7	17.2	25.4	3.7
Average	Barley	50.3	16.6	28.0	5.1
LMA, LAP	Maize	47.2	14.1	24.9	13.9
LMA, HAP	Maize	51.7	35.0	17.1	-3.9
HMA, LAP	Maize	41.8	50.7	-3.9	11.5
HMA, HAP	Maize	53.5	15.6	13.5	17.4
Average	Maize	48.6	28.9	12.9	9.7
LMA, LAP	Sorghum	30.6	29.9	26.7	12.8
LMA, HAP	Sorghum	48.0	14.6	15.2	22.2
HMA, LAP	Sorghum	42.4	33.0	28.6	-4.0
HMA, HAP	Sorghum	60.5	19.4	11.3	8.7
Average	Sorghum	45.4	24.2	20.5	9.9
LMA, LAP	Teff	51.8	25.2	15.7	7.3
LMA, HAP	Teff	38.4	9.3	73.8	-21.5
HMA, LAP	Teff	27.7	29.4	42.1	0.8
HMA, HAP	Teff	41.8	21.0	27.9	9.3
Average	Teff	39.9	21.2	39.9	-1.0
LMA, LAP	Wheat	55.7	38.7	7.5	-1.9
LMA, HAP	Wheat	47.5	30.7	35.3	-13.5
HMA, LAP	Wheat	50.2	32.7	23.0	-6.0
HMA, HAP	Wheat	41.5	26.8	17.2	14.4
Average	Wheat	48.7	32.2	20.8	-1.8

Note: HMA = ‘High Market Access’; LMA = ‘Low Market Access’; HAP = ‘High Agricultural Potential’; LAP = ‘Low Agricultural Potential’.

Responsibility System, marketability of rural construction land, and design of a national system of land registration.

The reform process has been distinctive: a) government-encouraged local experimentation informing dialogue on reform policy within the party; b) party policy declarations of reform directions; c) instructions from the party and from central government concerning implementation of those reform directions, which again sometimes move beyond and contradict existing law, and d) enactment of a law or laws consolidating the changes once they have proved themselves. From a “rule-of-law” standpoint, this has certain problems, but the success of this approach suggests that it might be helpful to have a legal basis for administrative “waivers” of existing law for specified localities to allow such piloting there.

Reform has been driven by the Central Government, overcoming resistance on ideological grounds at the center and meeting with resistance from provincial and local officials and party cadres, who have strong vested interests in the rent-seeking opportunities under existing arrangements.

Implementation of reforms has been limited by the weakness of China’s court system. In spite of initiatives in this area by Central Government in recent years, it remains difficult for most landholders, especially rural landholders, to effectively challenge illegal actions by officials in court.

The Ethiopian Experience

Ethiopian revolutionaries in the 1970s were partial to the teachings of China’s Mao Tse-Tung because he argued that a communist revolution was possible in a country which was still largely agrarian, without the proletariat whose development Marx considered a precondition for the revolution. China’s own experience proved this. The economic thinking of both the Derg and the EPRDF was tempered by experience but has certain ideological affinities with left ideologies.

The Derg's Public Ownership of Land Proclamation of 1975 (Proclamation 31 of 1975) abolished private ownership of land in Ethiopia through nationalization. It confiscated rural and urban land, extra houses, private schools, industries and commercial farms. No private ownership of land was possible, and the proclamation rules out transfers of land by sale, lease and mortgage, and hiring of labor. It accepted only use rights and set a 10 hectare maximum farm size. Those who lost land received no compensation. The reform model set out in these laws is a modified land-to-the-tiller model, with each household having a right to land though not necessarily to the land it had cultivated previously. Land was vested in a peasant association organized in each *kebele* (the average size of a PA being on the order of 800 ha) which allocated residential and farmland to households in equal amounts (Rahmato 1984).

The Derg attempted to promote collectivization of agriculture, but this was confined to a few areas of the country and soon faltered, ultimately being reversed. Unlike the case of China, there was no two-decade detour through collective farming before returning to small household-operated farms. In Ethiopia peasant farms remained peasant farms, though those farms and their holders were freed of tenancy obligations to landlords in the south of the country, and in the north, of the rights of lineages under customary land tenure systems. Cultivators did not receive secure tenure in particular parcels (as opposed to a general right to land) and redistributions were common. Both are important parallels to the Chinese experience.

The 1975 reform, the most extensive and most thoroughly realized land redistribution in modern African history, has left a strong mark on Ethiopia's land sector, and today's land tenure system shows a remarkable continuity from the model developed at that time. Administration of rural land in Ethiopia since 1975 has (as in China) been highly decentralized, in the Ethiopian case, down to the local peasant associations (*kebelles*), which allocate and redistribute land, and enforce rules concerning land use and transfers of use rights. Unlike the Chinese rural collective, the *kebele* does not own its land,

Table 9. Cereal Production per holder during (2001/02) and (2005/06 – 2007/08)

Crop	Production per holder		Acreage per holder	
	Average level (quintals)	Average annual growth rate (%)	Average level (hectares)	Average annual growth rate (%)
Cereals	10.9	3.2	0.9	-0.17
Teff	4.4	8.1	0.7	-0.32
Barley	3.3	3.1	0.4	0.87
Wheat	5.4	3.0	0.3	0.05
Maize	4.9	1.0	0.3	0.03
Sorghum	5.3	7.6	0.2	1.71

Source: Authors' computation using data in CSA (2003a), CSA (July 2006), CSA (July 2007), and CSA (June 2008).

Decomposition of Changes in Cereal Revenue. The revenue decomposition approach was used in two ways – crop-by-crop revenue and total cereal revenue. In both cases the revenue from a crop is computed as the product of crop output and crop price deflated by the national Consumer price index (CPI).⁷

Table 10 summarises the results of decomposing the changes in zonal-level revenue from each cereal. Recall that, for each crop, there are three sources of revenue growth—acreage growth, yield growth, and real price growth. The table reports the contribution of each by development domain but over all the years considered.

Again the average picture is clear:

- Acreage expansion was the top source of revenue growth for all cereals. This is to be expected since acreage increase generated the bulk of output growth during the period.
- Increases in yield made the second largest contributor to revenue growth in the case of maize, sorghum, and wheat. In contrast, real price rises stood second to acreage expansion as the origin of growth in barley and *teff* revenue

Period	Development Domain	Teff			Wheat		
		Change in crop area	Change in crop yield	Actual Change minus Estimated Change	Change in crop area	Change in crop yield	Actual Change minus Estimated Change
		1998/99-2000/01	41.6	65.5	-7.1	68.3	39.7
2001/02-2004/05	LMA, LAP	78.8	34.5	-13.4	72.8	31.5	-4.2
	HMA, LAP	49.5	57.3	-6.8	64.9	45.7	-10.7
	LMA, LAP	64.5	36.0	-0.5	80.9	15.0	4.1
	HMA, LAP	64.4	38.7	-3.1	64.2	42.7	-6.8
	All	56.2	28.2	15.6	48.9	42.2	8.9
2005/06-2007/08	HMA, LAP	45.4	71.7	-17.1	73.2	32.0	-5.2
	HMA, HAP	49.5	59.4	-8.9	57.2	42.6	0.2
	LMA, LAP	43.6	62.0	-5.6	64.7	43.2	-7.9
	LMA, HAP	97.0	7.1	-4.1	71.9	28.3	-0.2
	All	58.1	46.0	-4.1	42.3	54.7	3.0
All	72.9	28.7	-1.6	96.8	5.3	-2.1	
All	53.3	50.8	-4.1	70.0	40.6	-10.7	

Note 1: HMA = 'High Market Access'; LMA = 'Low Market Access'; HAP = 'High Agricultural Potential'; LAP = 'Low Agricultural Potential'.

Note 2: The annual Agricultural Sample Survey for 2002/03 was not implemented due to the burden of processing the Agricultural Sample Enumeration (informally the 'agricultural census') of 2001/02. Thus 2002/03 is not included - i.e., the period 2001/02-2004/05 includes 2001/02, 2003/04, and 2004/05.

which remains owned by the nation.

The legal position has not changed much under the EPRDF. The basics of the old system are confirmed in the current Federal Constitution (Proclamation 1 of 1995). Section 40(3) provides that:

The right to ownership of rural and urban land, as well as of all natural resources, is exclusively vested in the State and in the peoples of Ethiopia. Land is a common property of the Nations, Nationalities and Peoples of Ethiopia and shall not be subject to sale or other means of exchange.

Article 6 of the Federal Constitution provides for land redistributions, and Article 40(4) preserves the notion that all Ethiopian peasants have the right to obtain land without payment.

Rural Land in Ethiopia

As suggested earlier, the EPRDF government that came to power in 1991 has more or less followed the land tenure model it inherited. Its lead party, the TPLF, had pioneered land reform in liberated areas of Tigray in the 1980s. It came to the land reform task with ideas about land reform based on that experience in Tigray, a familiarity with Chinese models, and a knowledge of the workings of a customary form of village land tenure in Tigray under which all resident households had access to land according to their ability to cultivate, known as *chiguraf-gwoses* or *diessa*.

The new government in its Federal Rural Land Administration Proclamation (89/97) set out the basics for the land tenure system. The most important change for earlier land administration statures was that it reformulated the political context of land reform by empowering new ethnically-based regional states to both elaborate upon the tenure basics and to supervise peasant association administration of land resources. It established the right of inheritance of holdings (Art. 2,3) and a right to receive compensation for labor and

capital investments on land that is redistributed (Arts. 6, 7-12). The most important change introduced by the EPRDF in the land tenure model inherited from the Derg is the allocation of land parcels to women (both wives and unmarried women) in their own right (Berhane and Haile 1999). The 1997 Federal Law has been replaced by a new version in 2005. The land laws enacted by the regions must comply with the terms of these laws. Four regions have developed these laws, and those now in play are Tigray (1997, amended 2002), Amhara (2000), Oromia (2000) and Southern (2003).

While most regional state governments have publically disassociated themselves from future land redistribution, neither the federal government nor most regions have divested themselves of the legal power to redistribute land (EEA/EEPRI 2002, Rahmato 2007). Oromia is the exception, since it promises lifelong rights and rules out redistribution (Rahmato 2008). Numerous studies suggest that only a minority of farmers are confident that there will not be further redistributions (Deininger et Jin 2006); for example, an EEA/EEPRI household survey (2002) found that only 27% of those interviewed were confident that the land they were using would not be redistributed.

Transfer of land to heirs is permitted, but subject to certain conditions and administrative procedures, which vary from region to region. Sub-leasing is allowed by federal law and by regional laws, but the regional laws limit amounts that can be sub-leased and allow only annual or other very short-term sub-leases. Again, the exact limitations differ from region to region. Sales or mortgaging of the use right are not permitted in any case, consistent with the federal constitution (Crewett & Korf 2008, Rahmato 2007). In spite of this, informal markets in land rights do operate.

Table 8. Median Contributions to Changes in Quantity of Cereal Output by Crop, Development Domain, and Period (1998/99 – 2007/08)

Period	Development Domain	Barley			Maize			Sorghum		
		Change in crop area	Change in crop yield	Actual Change minus Estimated Change	Change in crop area	Change in crop yield	Actual Change minus Estimated Change	Change in crop area	Change in crop yield	Actual Change minus Estimated Change
1998/99-2000/01	LMA, LAP	69.4	40.0	-9.4	78.6	24.1	-2.8	60.7	34.9	4.4
	LMA, HAP	93.7	9.7	-3.4	89.3	19.9	-9.2	24.2	75.5	0.3
	HMA, LAP	82.1	22.8	-5.0	66.3	43.1	-9.4	73.3	31.0	-4.3
	HMA, HAP	70.5	38.2	-8.7	71.2	31.7	-2.9	89.6	15.2	-4.8
2001/02-2004/05	LMA, LAP	87.3	14.6	-1.9	48.9	49.1	2.0	49.7	46.8	3.5
	LMA, HAP	66.1	33.7	0.2	97.8	2.6	-0.4	38.9	56.7	4.4
	HMA, LAP	76.1	15.4	8.5	66.1	33.5	0.4	56.3	47.9	-4.3
	HMA, HAP	65.3	31.7	3.0	43.9	55.2	0.8	70.5	26.4	3.1
2005/06-2007/08	LMA, LAP	67.4	38.3	-5.7	47.6	64.6	-12.2	59.1	49.4	-8.5
	LMA, HAP	98.8	0.5	0.7	64.3	23.7	12.0	40.6	67.4	-8.1
	HMA, LAP	53.1	46.6	0.3	87.6	21.4	-9.1	66.7	41.9	-8.6
	HMA, HAP	67.0	36.5	-3.5	53.0	47.8	-0.8	78.6	29.0	-7.6
All	All	72.2	32.5	-4.7	65.6	37.2	-2.8	66.6	33.7	-0.3

Decomposition of Change in Quantity of Cereal Output. Table 8 summarises the results of the decomposition analysis as applied to quantity of output by major cereal types. The average story is very clear. During the study period, acreage expansion was the more important source of growth in output for the five major cereals.

- Out of the sixty crop-domain-period specific pairs of yield and acreage contribution shares, in only twelve did the share of yield was higher.
- No statistically significant correlation can be detected between zonal-level acreage share of a crop and the importance of yield changes as a source of zonal-level growth in that crop's output.
- The relative contributions of acreage and yield changes to output growth were not statistically significantly different across development domains as well as time periods. As the only exceptions, the output growth contribution of changes in sorghum yield and acreage were different across domains.

Interestingly, *teff* is an exception. It is the only cereal with comparable contribution coming from acreage and yield increases. In fact, *teff* has the largest number (five out of possible twelve) of yield-acreage contributions with the share of yield higher. A look at per holder levels and changes in acreage and output may indicate to handle on why (Table 9). *Teff* acreage per holder was on average declining during the second-half of the study period, while *teff* production per holder was growing the fastest. More systematic analyses in terms of holders can thus be a very fruitful complement to explorations in terms of hectares.

Urban Land Tenure in Ethiopia

In urban areas, government in 1994 introduced a system of permits, indefinite in duration. More recently government has encouraged conversion to leaseholds from the city, which can be for up to 99 years for residential properties and lesser periods for other uses (Tesfaye 2008). In Addis Ababa, there are houses held under permit from before 1994, rental units held by *kebelles*, leaseholds since 1994, and many informal holdings. Government has urged conversion of permits to leaseholds, but holders have been reluctant because charges are higher under the leases. While permits are indefinite in duration, the leaseholds have stated terms; urban leaseholds may be transferred and made security for loans, which permits may not, though informal transfers of land under permits certainly occur (Berriford 2002, 2004).

Some Key Points on the Ethiopian Land Reform

The position today, painting with a very broad brush that ignores some important local variations, is as follows:

1. All land is publically owned, with administration decentralized to the regional states and to *kebelles*, with access and use governed by regional laws which must however be consistent with the terms of the federal legislation.
2. Rural households have use rights under terms of varying duration, depending on a number of factors, but these are to some degree insecure even within their terms because of a) use conditions to which they are subject and which can lead to revocation, and b) the potential for land reallocations.
3. While rural land use rights can be inherited during their term, transfers of land use rights are not allowed, though informal transfers are not unusual.
4. While the initial allocations of land under the Derg were to households rather than individuals, and this meant that women held no land in their own right, under the EPRDF a number of regions have shifted to allocations to women.

The exact position today is difficult to assess, though an end to reallocations of land will make it more difficult for women moving to their husbands' villages to obtain land.

5. Takings of land for public purposes require compensation for investments or improvements in the land. Alternative land may be provided where land is taken, which may or may not be adequate (Crewett & Korf 2008).
6. Urban land rights, in the form of long-term leaseholds, operate under a legal framework which allows them to be transferred and used as security for loans. There is thus a considerable contrast between urban and rural land rights, the latter being much less marketable.
7. In the rural areas, given the weakness of the judiciary, the power to interpret rights and apply limitations on those rights rests largely with local officials, who may themselves not understand the rules of the tenure system very well (Rahmato 2008).
8. Government has embarked on a program of certification of individual landholdings, with documents evidencing use rights provided to holders, but without any strengthening of the rights registered. Commentators assess the impact of certification quite differently (Deininger et al. 2008, Rahmato 2007).
9. Reform proposals run afoul of strong equity objections, grounded in the assumption that increased marketability of land will result in unacceptable concentrations of ownership (a questionable assumption) and increase landlessness (much more likely, though the rapidity of the increase may be overestimated).

COMPARISONS

Let me suggest some parallels and divergences between the Chinese and Ethiopian experiences.

sorghum production (54.8 percent). There are also differences across development domains. Though not large, these differences are statistically significant for maize and wheat yield as well as barley, maize, and *teff* area (See Taffesse 2008).

Table 7, in contrast, reveals considerable difference in the frequency of positive changes across the three periods. All differences are also statistically significant, except barley yield. Most frequent acreage expansion occurred during the first period (1998/99-2000/01), while the incidence of yield increases was highest in the third (2005/06-2007/08). These are respectively consistent with a gradual adjustment of acreage to market reforms and improving farm management practices.

Table 7. Direction of Change in Cereal Area and Yield – by Periods all Domains, (1998/99 – 2007/08)

Change in	Period		
	1998/99-2000/01	2001/02-2004/05	2005/06-2007/08
Barley Yield	58.6	53.9	58.1
Barley Area	66.4	53.8	49.2
Maize Yield	50.0	47.4	66.4
Maize Area	74.1	37.6	70.7
Sorghum Yield	50.4	50.9	62.0
Sorghum Area	62.3	50.5	60.2
Teff Yield	53.5	58.1	62.9
Teff Area	75.9	51.3	65.0
Wheat Yield	57.9	64.4	68.0
Wheat Area	74.1	61.1	47.5

Source: Authors' computation using CSA data.

Note: Each entry in columns 2-4 represents the fraction of zone-year pairs which recorded a positive year-on-year change in the variable in the corresponding row.

Table 6. Direction of Change in Cereal Area and Yield – by Domains, all Periods (1998/99 – 2007/08)

Change in:	Development Domain				All
	LMA, LAP	LMA, HAP	HMA, LAP	HMA, HAP	
Barley Yield	54.8	50.0	55.4	56.7	55.1
Barley Area	58.1	43.3	54.7	55.6	55.2
Maize Yield	49.3	60.0	57.0	52.4	53.5
Maize Area	56.0	63.3	62.5	51.2	57.8
Sorghum Yield	51.1	52.9	50.0	50.0	50.6
Sorghum Area	52.6	52.6	55.4	57.8	54.8
Teff Yield	53.4	54.2	56.2	50.0	53.6
Teff Area	59.3	48.1	62.3	60.0	59.7
Wheat Yield	65.4	60.0	58.3	59.1	60.8
Wheat Area	59.8	60.0	60.0	58.0	59.4

Source: Author’s computation using CSA data.

Note 1: Each entry in columns 2-5 represents the fraction of zone-year pairs which recorded a positive year-on-year change in the variable in the corresponding row.

Note 2: HMA = ‘High Market Access’; LMA = ‘Low Market Access’; HAP = ‘High Agricultural Potential’; LAP = ‘Low Agricultural Potential’.

Direction of Change. The direction of change (rather than magnitude of change) in a variable identifies whether the variable has recorded a positive or negative or no year-on-year change in the specific zone and during the given year.

Consider Table 6 first. It shows that more zone-year pairs recorded increases than decreases in both cereal yield and cereal acreage. As expected, there are differences across cereal types. While wheat yield experienced increases most frequently (60.8 percent), sorghum yield recorded least frequent increases (50.6 percent). Somewhat surprisingly, maize yield also recorded a frequency of increases of only 53.5 percent. In terms of area, most frequent expansion was in *teff* production (59.7 percent) with the least fraction of increases being in

Similarities:

1. In Ethiopia, as under the HRS in China, land has been allocated by local communities to resident households for farming.
2. Both systems initially utilized periodic reallocations of land, intended to adjust landholdings to accommodate new households. Young men who married could hope to receive an allocation independent of the parental household without waiting to inherit land. In both countries, however, redistributions came with time to be seen as seriously reducing security of tenure and they were commonly abused by local officials, leading to reduction in their frequency or their abandonment altogether.
3. In both countries, pressure on land is intense. Farmers work micro-plots and fragmentation of holdings is extensive. The average holding size in Ethiopia is larger than in China, but in Ethiopia the farmland is largely rain-fed, while in China a large portion of the land is irrigated and has far higher productive potential.
4. In both countries, the land use right is gradually being strengthened and their terms have increased, if gradually. In both cases, early on, the frequent reallocations of farm holdings among households meant that little continuity or security of tenure existed. In both countries, popular perceptions of and public demand for greater security of tenure have increased in recent years.
5. In both countries, all transfers in rural land rights were initially prohibited, including inheritance. Today, use rights are inheritable within their terms and sub-leasing of land use rights for farmland is accepted, though assignments and longer term sub-leases are not allowed.
6. In both countries, legal transferability of land use rights is much more advanced for urban than for rural land use rights, and urban land is transacted much more often, in both formal and informal markets.
7. It is clear that neither government is willing to abandon

public ownership of all land, and that both prefer to persist in what the Chinese refer to as the “two-tier” system of public land ownership and private land use rights.

Differences

1. In the case of Ethiopia, in most areas, household farming has been a consistent pattern since the reform of 1975, whereas China went through a massive collectivization and then a de-collectivization. The major increases in productivity in Chinese agriculture during the 1980s appear to have been due primarily to incentives generated by this return to household cultivation, and a mobilization thereby of the almost biological instinct to work for one’s family. Those increases occurred in spite of the fact that tenure security during the 1980s remained low due to periodic redistributions of land. In Ethiopia, incentives associated with household cultivation were always in place. The elimination of tenancy in southern Ethiopia might have been expected to have had an incentive effect, but it is not clear that it did so.
2. In China, the fact that at the outset of the reform staples produced above the quota and non-staple crops exempted from the quota could be freely marketed seems to also have had a significant incentive effect, as did the gradual removal of controls on staples. The author is aware that a quota system of some kind was in effect in the early years of the reform in Ethiopia, but has not been able to find references in the literature that permit comparisons.
3. While in China early allocations of land were according to labor units in the household, with the presence of wives influencing the extent of the allocation, in Ethiopia under the Derg allocations were the same for each household. As Ethiopia under the EPRDF has moved more toward discrete allocations for women, China has reduced reallocations and that is reducing opportunities for women to hold land in their own rights. That will likely also be the impact

Table 5. Area, production and yield of major cereals (private peasant holdings for Meher season), 1996/97-2007/08

Year / Period	Crop	Production		Area Cultivated		Yield	
		Level (quintals)	Growth rate (%)	Level (hectares)	Growth rate (%)	Level (quintals per hectare)	Growth rate (%)
1996-1997	Barley	11,934,200		857,450		13.9	
	Maize	19,098,430		1,156,670		16.5	
	Sorghum	14,680,910		988,290		14.9	
	Teff	17,814,880		2,099,780		8.5	
	Wheat	10,626,390		814,600		13.0	
	Sum	74,154,810		5,916,790			
2001-2002	Barley	9,319,063	-21.9	771,515	-10.0	12.1	-13.2
	Maize	28,002,089	46.6	1,323,038	14.4	21.2	28.2
	Sorghum	15,462,081	5.3	1,132,496	14.6	13.7	-8.1
	Teff	16,273,155	-8.7	1,818,375	-13.4	8.9	5.5
	Wheat	14,444,338	35.9	1,005,000	23.4	14.4	10.2
	Sum	83,500,726	12.6	6,050,423	2.3		
2006-2007	Barley	13,521,480	45.1	1,019,314	32.1	13.3	9.8
	Maize	37,764,397	34.9	1,694,522	28.1	22.3	5.3
	Sorghum	23,160,409	49.8	1,464,318	29.3	15.8	15.8
	Teff	24,377,495	49.8	2,404,674	32.2	10.1	13.3
	Wheat	24,630,639	70.5	1,473,917	46.7	16.7	16.3
	Sum	123,454,420	47.8	8,056,745	33.2		
2007-2008	Barley	13,548,071	0.2	984,943	-3.4	13.8	3.7
	Maize	37,497,491	-0.7	1,767,389	4.3	21.2	-4.8
	Sorghum	26,591,292	14.8	1,533,537	4.7	17.3	9.6
	Teff	29,929,235	22.8	2,565,155	6.7	11.7	15.1
	Wheat	23,144,885	-6.0	1,424,719	-3.3	16.2	-2.8
	Sum	130,710,974	5.9	8,275,743	2.7		
1996/97 - 2007/08	Barley		13.5		14.9		-1.2
	Maize		96.3		52.8		28.5
	Sorghum		81.1		55.2		16.7
	Teff		68.0		22.2		37.5
	Wheat		117.8		74.9		24.5
Sum		76.3		39.9			

Source: Author’s computation using CSA data (CSA (March 1999), CSA (2003a), CSA (July 2007), and CSA (June 2008).

- Acreage expansion also dominates as a source of growth at the crop level. A striking exception is *teff*—rising yield contributes more than increased acreage.

Combining this with other data and analysis (see Taffesse 2008), the main message here is that cereal growth has been extremely volatile during the study period. The following key features can be noted.

- As expected, acreage and yield levels vary widely within and across years – a large part of the latter almost certainly a reflection of rain-fall variability.
- The link between output and acreage, measured by simple correlations, was much stronger (above 0.9 for all crops) than that between yield and output (around 0.5 for the four cereals and slightly higher than 0.6 for maize).

What remains to be seen is whether this pattern in the sources of growth continues to hold under a more systematic decomposition analysis. To this end, this paper applies quantity and value decomposition of the changes in cereal output. The decomposition analysis reveals the relative contribution of changes in acreage and changes in yield to the overall change in the quantity of output. It also reveals the role played by changes in prices which reflect market development, and changes in pattern of acreage allocated to alternative crops which reflects differences in returns to crop cultivation.

These are policy-relevant issues to the extent that acreage and yield changes reflect government interventions in agriculture and the wider economy. So, to shed more light on these issues, we examine here several key findings from the decomposition analysis.

of reduced reallocations in Ethiopia.

4. While China makes a fundamental distinction between state ownership of urban land and collective ownership of rural land, all land in Ethiopia is publicly owned. Nonetheless, Ethiopia also exhibits a dualism in land tenure rights developing, with urban land rights more marketable than rural land rights. The author is not familiar with the mechanisms by which rural land is absorbed into municipalities in Ethiopia, and whether it potentially poses similar advantages and dangers as those experienced in China.
5. While there is recognition by both governments that land redistributions undermined security of tenure, and a tendency to reduce their frequency, neither country has legally abandoned the principle that rural land can be redistributed. In China, however, new laws now require that the community vote by a 2/3 majority to allow a reallocation to proceed. Ethiopia has not introduced similar community option.
6. At the same time, in China the liberalization of land markets is providing an alternative mechanism for redistribution of land. Sub-leases of farmland are increasingly common, as are assignments (sales) and mortgaging of urban use rights and now of rights in rural constructions land. The position in Ethiopia is not very different for urban leases, but the transferability of urban leases is more limited. In both countries the gradual movement toward markets in land rights is directly connected to reduction of frequency or abolition of periodic land redistributions. It is difficult for the two modes of adjusting land holdings to co-exist. They “march to different drummers”. Failure to allow markets in land rights to operate will likely eventually result in further administrative reallocations.
7. In both countries, expropriation of rural land has been managed to the disadvantage of rural landholders, in part because markets in land rights have been legally restricted and the market value of such land is not established.

Compensation for rural land has tended to be for value of agricultural use (for instance, a multiple of the value of annual agricultural production) even in peri-urban situations. This appears to be changing rapidly in China, with provision for compensation for investments on urban construction land requisitioned by the state, and provision for markets in rural construction land, but there seems to not be a comparable trend in Ethiopia.

8. The desirability of “scaling-up” agriculture to larger managed holdings has been argued both Ethiopia and China, but evidence suggests that smaller parcels are still the most productive. In Ethiopia, the discussion has not progressed very far, reflecting the lack of other labor opportunities outside agriculture. In China, the Government is increasingly disposed to allow markets in land use rights to do the job of scaling-up, as reflected in the October 2008 Central Committee decisions. This is taking place in the context of a major loosening of government restrictions on movement to towns (recognizing that vast numbers of “floating labor” have already moved from the rural areas to the towns). This process does not appear very advanced in Ethiopia, perhaps due to a modest growth (at least by comparison to China) of non-agricultural employment. In China, the danger of loss of land by those moving to urban areas no longer seems an effective disincentive to labor migration.
9. Ethiopia has recently embarked on a major program of land use right certification program which has been reviewed in quite positive (Deininger et al. 2007) and more cautious terms (Rahmato 2008: 181-227). The model is remarkably low-cost, and has engendered a good deal of interest internationally. China is embarking on a nation-wide program of registration of individual parcels as well, though its nature is not yet clear. The Chinese registration system, as defined in the Property Rights Law of 2007, is to be nation-wide and compulsory. In Ethiopia, implementation of certification is proceeding in Ethiopia on a regional basis, though within regions government appears to intend to be comprehensive

Table 4. Cereal production estimates of acreage and output (Meher season), 2004/05-2007/08 (1997-2000 E.C.)⁶

Crop	Number of holders	Average – 2004/2005 – 2007/08			
		Area Cultivated in hectares		Production in quintals	
		Level	Share in total area cultivated (%)	Level	Share in total production (%)
Grain	11,519,148	10,382,365	92.7	140,902,733	79.8
Cereals	11,156,837	8,230,211	73.4	120,629,724	68.3
Teff	5,462,782	2,337,850	20.9	24,079,480	13.6
Barley	3,842,462	1,024,390	9.1	13,264,217	7.5
Wheat	4,118,164	1,439,098	12.8	22,933,077	13.0
Maize	7,287,931	1,595,238	14.2	33,142,865	18.8
Sorghum	4,253,534	1,429,886	12.8	22,161,808	12.5
Pulses	6,377,027	1,384,499	12.4	14,955,466	8.5
Oilseeds	3,127,131	767,655	6.9	5,317,543	3.0
Vegetables	4,936,741	106,585	1.0	4,248,252	2.4
Root crops	4,757,733	174,826	1.6	14,732,919	8.3
Fruit crops	2,658,415	51,078	0.5	4,034,590	2.3
Chat	2,068,262	141,881	1.3	1,264,269	0.7
Coffee	3,049,120	305,940	2.7	2,106,711	1.2
Hops	1,685,422	23,457	0.2	263,111	0.1

Source. Authors’ computation using CSA (July 2006), CSA (July 2007), and CSA (June 2008).

Note. E.C. stands for Ethiopian Calendar. The Ethiopian Calendar roughly spans the months of September to August of the Gregorian Calendar.

Table 5 reports the levels of output, acreage, and yield, and growth rates for the five major cereals, and reveals that

- The most rapid growth in cereal production occurred in the second-half of the period under consideration (specifically, 2001/02-2006/07).
- Acreage expansion originates the bulk of the growth in output during the period, though the contribution of yield growth rises measurably towards the end of the period.
- Wheat and barley production recorded the highest (118 percent) and lowest (13 percent) growth in output, respectively.

2. A Decomposition of Cereal Production Growth in Ethiopia

Cereals—primarily barley, maize, sorghum, *teff*, and wheat—are by far the most important group of commodities in Ethiopia in terms of their share in area cultivated, output, and household consumption. It is for this reason that we focus on cereals when decomposing growth in Ethiopia's crop production sector.

This section reports on the results of the decomposition analysis using the zonal-level data from the Central Statistics Agency (CSA). The reported results cover the direction of change in cereal production, the decomposition of changes in the quantity of cereal output, and the decomposition of changes in cereal revenue, with an emphasis on the period 1996/97-2007/08. Two sets of descriptive statistics (Table 4 and Table 5) are presented at this point. The purpose is to provide a clearer picture of the growth pattern that is to be studied in the subsequent decomposition analysis.

and cover all holdings. Comprehensive registration of all land has been questioned by some researches in this area, who stress that there are preconditions needed to make registration a good and sustainable investment (Bruce and Migot-Adholla 1994). The role of the market in land use rights as set out in national land policy should be a major consideration in determining the registration model, as more expensive models can only be justified if a large, impersonal market in land use rights is anticipated.

10. In China, land tenure reform has been driven by central government and local communities, but resisted by provincial and local officials. It is central government which has created the space for local experiments with land tenure change, which could if successful be replicated on a larger scale. Because of the decentralization of land management, it is local cadres and officials who have the best opportunities for rent-seeking under the existing system, and who out of that vested interest resist change. In Ethiopia, it appears that innovation is coming more from the regions, within the limited scope allowed by federal law.

Some Broader Issues: Context Matters

Land reform models cannot be imported from one country to another, at least not without adjustments to local circumstances. In addition to issues raised by comparisons of features of the land reform experiences in China and Ethiopia, there are issues of context raised by characteristics of the larger economies and societies of the two countries. These, as much a particular characteristics of the land reforms, can help explain why the model has performed differently in the two countries.

Urban markets and rural development

When the HRS reforms were launched, there were stringent controls on population movements from the countryside to urban

areas and draconian programs in place to slow population growth. But there were already long-established, massive urban centers throughout much of the country. These had huge unmet demands for agricultural production, and provided ready markets for increased production. The rapid construction of marketing chains after introduction of the HRS has not been well documented, but was impressive. Those chains initially developed for the non-staple food products decontrolled early, then expanded as other crops were decontrolled. Ethiopia, with the lowest urbanization in Africa, has offered farmers much smaller urban markets. The issue has been raised by Berhanu Nega and Befekadu Degefe (2003), who suggest that Ethiopia lacks the domestic markets sufficient to sustain rising prices of agricultural production in good years. This appears an important constraint upon potential impacts of further land tenure reforms.

Rural industrialization and rural development

The rural economy in Ethiopia is much less diversified than that of China, where there has been substantial rural industrialization. China's attempt to industrialize its rural areas began with backyard steel furnaces during the Great Leap Forward (1958-1961), an attempt which ended disastrously. Later, at height of the collectivization in the 1960s and 1970s, rural electrification made important strides and small industries were established in many communes. These tended to deal with needs for which there were local or state-managed markets, for instance food processing, brick making, cement making and production of clothing and fertilizer.

When the commune system collapsed in the early 1980s, these local industries became the base for what came to be called Township and Village Enterprises (TVEs). It appears that this began on the initiative of the communities which inherited the factories, inserting large amounts of labor, the plentiful factor of production. Rural industrialization was only later and embraced by government as policy (Pei 2005). During the 1980s and 1990s, employment in the TVEs grew much more rapidly than in the state industrial sector,

concludes in Section 4 with several forward-looking scenarios that introduce options for improving the effectiveness of agricultural input, extension, and education systems to stimulate more rapid smallholder commercialization and agricultural growth.

Note the following caveats. The first relates to geographic and seasonal coverage. The paper covers only four regions of Ethiopia: Amhara, Oromiya, SNNP, and Tigray. However, this is not much of a limitation as far as cereal production is concerned: The four regions account for nearly all of area cultivated with cereals (97 percent) and cereal output produced (97 percent), and have accounted for such large shares consistently over time. The paper also covers only the Meher season and not the Belg season of the Ethiopian cropping year. However, it is the Meher season that accounts for most of cereal production (about 95 percent) in the country.

Second, this paper does not identify the specific input needs of smallholders to promote the intensification of cereal production, for example, types of varietal traits, quantities of various production inputs, or the material and informational compositions of extension packages. These types of issues are determined by the type of crop, soil, moisture, and farming practices in question, and are more appropriately addressed with detailed agronomic and socioeconomic data that go beyond the scope of this paper. However, the growth decomposition analysis presented in this paper *does* take a significant step in the direction of agro-ecological and socio-economic specificity by examining "development domains" and their contribution to providing a more nuanced analysis of agricultural productivity and growth in Ethiopia. See Annex 1 for complete discussion of development domains.

though they were higher than the average for Eastern Africa.⁵ It is clear that the rate of growth needed to close the yield gap with highly productive countries like Egypt and Vietnam are even greater than the reasonable growth rates achieved in Ethiopia during recent years.

Table 3. Area under improved farm management practices by crop, private holdings – 1997/98, 2001/02, 2007/08

Crop	Share of crop area (%)									Extension package covered crop area
	Improved seed applied crop area			Pesticide applied crop area			Irrigated crop area			
	2007/08	2001/02	1997/98	2007/08	2001/02	1997/98	2007/08	2001/02	1997/98	
Cereals	4.7	3.5	2.4	20.8	10.80	12.0	1.1	1.3	0.64	14.5
Teff	0.7	0.6	1.7	30.5	16.60	17.7	0.7	0.7	0.66	13.8
Barley	0.6	0.4	0.1	20.7	9.07	9.6	1.2	0.8	0.62	11.0
Wheat	2.9	2.0	5.6	43.6	28.11	31.3	0.5	0.4	0.32	21.9
Maize	19.5	12.5	5.2	2.9	1.93	1.3	2.2	3.2	1.10	21.3
Sorghum	0.1	0.4	0.2	5.4	1.69	3.1	1.2	1.1	0.39	1.4

Source: Authors' computation using CSA data (CSA (September 1998), CSA (July 2003b), and CSA (August 2008)).

But a more in-depth analysis of Ethiopian agriculture is needed to better understand these issues. This paper continues in Section 2 by providing evidence on the contributions of potential sources of growth in cereal production via the decomposition of changes in the quantity/value of cereal production into its constituent sources. This is followed in Section 3 by an examination of the input markets and systems, the capacity of both state and markets to meet these needs, and the major constraints to meeting those needs. The paper

and this provided substantial opportunities for non-agricultural employment to rural people. Some of the TVEs were poorly located and as markets became more open, a consolidation process took place in which some were phased out and still others were closed or privatized. But most continued operation for this period as public enterprises, and found niches in provincial and even national markets. Many have in the past decade been privatized, but from 1980-2000, these small to medium local public enterprises played an important role in the development of rural China (Zhang 1999).

A detailed analysis of this is beyond the scope of this paper, but it seems that nothing like the rural industrialization on the Chinese model has been attempted in Ethiopia. It is perhaps worth considering whether small scale factories with potential for in-region consumption of production could not be promoted by federal or regional governments. At the level of some regional capitals, this seems to be taking place through private investment, and should be encouraged by government. In others, if such private investment is not forthcoming, strong federal government sponsorship may be needed, whether through direct public investment or through major incentive packages for private operators willing to invest. It is questionable whether, given the low level of urbanization in Ethiopia, the Chinese model of industrialization in rural weredas and communities is appropriate.

Decentralization and Innovation

There is a further contextual issue, and in this case it is the political/legal context of change that is an issue. Ethiopia's federal system ought to facilitate experimentation with tenure forms, but the national legal framework is quite limiting. This was true in China as well, but under the pressure of events and in light of the sustained lack-luster performance in its collective agriculture, the Chinese government seems to have been more open to anxious to change and experimentation. The State Council funded (and still funds) several large think-tanks with various specializations, such as Du Runsheng's Research Center for Rural Development which in the

1970s and 1980s played a major role in land policy experiments around the country and their translation into policy. In the past decade the Development Research Center has played a major role in helping government think through land reform issues.

These research centers conduct studies, encourage experimentation and cull local experiences for valuable ideas for presentation to the party leadership. Village and township level experiments with new institutional forms were the basis for both collectivization and de-collectivization, and gave the leadership confidence in the workability of proposed changes. They also provided teaching stories (such as “Learn from Fengyang”, at the outset of the Household Responsibility System reform) that convince the population of the viability of reforms. When the author first visited China in the mid-1980s, as a consultant for the World Bank, he toured land tenure experimental zones around China, and was impressed by both their diversity and the seriousness of purpose of those involved (Bruce and Harrell 1989).

Consideration should be given to expanding the role for local experimentation with tenure rules in Ethiopia. Given the federal system, experimentation might most appropriately be carried out in the regions, but there would be a need for law and policy waivers from the federal government. Such experiments could best be done at *wereda* level. With local government encouragement, such experiments could be designed by communities themselves in interaction with university or other think-tanks. Their results would need to be carefully studied and made public.

Conclusion

China has addressed its problems of land scarcity and low land productivity coming out of the commune system very successfully in the past two decades. This was carried out under the Household Responsibility System, a system which resembles that of Ethiopia in many particulars. It seems clear that this reform model has not performed as well in Ethiopia, and this calls for careful examination.

The limited use of modern inputs is a major characteristic of cereal production in Ethiopia that explains its current low productiveness (see Table 2, Table 3). Only about 40 percent of cereal acreage benefit from chemical fertilizers. Intensity of fertilizer use is relatively low when estimated as quantity of fertilizer per hectare of total cereal acreage.⁴ Meanwhile, the use of other modern inputs is even more limited. In 2007/08, improved seeds were applied over about 5 percent of cereal acreage. This largely reflected the highest rate (19 percent) in maize production with negligible rates in the production of other cereals.

Table 2. Fertilizer application by crop, private holdings - 1997/98, 2001/02, 2007/08

Crop	Fertilizer Applied area (share in total area cultivated - %)			Fertilizer application (total quintals/ total hec- tares)			Fertilizer application (quintals per hectare of fertilizer applied area)		
	2007/08	2001/02	1997/98	2007/08	2001/02	1997/98	2007/08	2001/02	1997/98
Cereals	39.0	42.8	32.3	0.45	0.30	0.37	1.16	1.00	1.15
Teff	54.3	49.9	44.9	0.52	0.40	0.50	0.95	0.91	1.11
Barley	30.5	39.6	34.4	0.30	0.20	0.33	0.99	0.79	0.97
Wheat	62.1	56.7	57.0	0.85	0.56	0.75	1.36	1.12	1.32
Maize	32.8	45.7	18.0	0.54	0.28	0.25	1.63	1.33	1.39
Sorghum	3.1	16.9	2.9	0.03	0.01	0.04	1.05	0.54	1.26

Source: Author's computation using CSA data (CSA (September 1998), CSA (July 2003b), and CSA (August 2008)).

In short, cereal production shares the constraints and potentials associated with crop production more broadly. A comparative look at yield levels in other parts of the world provides a helpful perspective, in this regard. During 2004-2007, average cereal yield in Egypt was more than five-fold of the level attained in Ethiopia, while that in China and Vietnam were more than three-fold. Ethiopia's yield levels were lower than the Least Developed Country average,

The striking feature of the period is the double-digit average annual growth registered in cereals, and more broadly grain, production. The speed of growth in the sector during the period was somewhat varied across crops. Average annual growth in output was fastest in maize production (18.9 percent) closely followed by sorghum production (18.3 percent). The slowest output growth was recorded in barley production. It is also interesting to note that, on average, yield growth was faster than acreage expansion for the main cereals during the period. A conspicuous exception was maize—a crop considered to have the highest potential for yield increases.

Table 1. Cereal production by crop – 2004/05-2007/08 (1997-2000 E.C.)

Crop	Number of holders	Average - 2004/2005 - 2007/08					
		Production (quintals)		Area Cultivated (hectares)		Yield (quintals per hectare)	
		Level	Annual growth rate (%)	Level	Annual growth rate (%)	Level	Annual growth rate (%)
Grain	11,519,148	140,902,733	11.8	10,382,365	3.9		6.2
Cereals	11,156,837	120,629,724	12.2	8,230,211	4.8	14.0	
Teff	5,462,782	24,079,480	15.9	2,337,850	6.7	10.2	7.7
Barley	3,842,462	13,264,217	0.7	1,024,390	-3.4	13.0	4.5
Wheat	4,118,164	22,933,077	2.1	1,439,098	0.6	15.9	1.5
Maize	7,287,931	33,142,865	18.9	1,595,238	9.0	20.6	7.8
Sorghum	4,253,534	22,161,808	18.3	1,429,886	7.4	15.4	8.9

Source: author's computation using CSA data (CSA (July 2006), CSA (July 2007), and CSA (June 2008)).

Note: Cereal yield is calculated as acreage-share weighted average of the yields of the five major cereals listed in the table – they account for more than 95 percent of cereal acreage and cereal output.

The answers lie, this paper suggests, partly in the path by which the reform was achieved (the decollectivization of agriculture in China as contrasted with the persistence of peasant agriculture in Ethiopia) and partly in the context: a) significant demand for non-agricultural labor in China's rural areas, b) a proportionately much larger urban market for food in China, and c) a lack in Ethiopia of a model for local experimentation with land policy. This discussion has implications for land policy, but it is suggested that the key to greater success lies in greater efforts to increase industrialization and urban growth, coordinated with land tenure reforms in the rural sector.

Footnotes

1. EEA/EEPRI (2002) notes that scarcity of cultivated land is a serious problem. That survey found that 48% of the sample households owned less than the minimum land required for subsistence food production; the proportion increased to 75% in Tigray.
2. The Chinese Communist Party has seen law not as a tool for change but as a means of confirming change accomplished by other means, through party or state directives. This contrasts with the practice of the Party in the Soviet Union, which stressed “socialist legality” and sought to use law in achieving social and economic objectives (Bruce and Harrell 1989)
3. These concerns are reflected in World Bank (2004), reporting on a AAA research program in collaboration with China’s Development Research Center, a research center of the State Council, a program in which the author participated.
4. The document reflecting the Central Committee decision is annexed, both for its content and to give readers a sense of the very dense nature of it and similar documents. The wording of such guidance is often heavily negotiated, and as a result, is sometimes less than crystal clear.
5. Dessalegn Rahmato (2008: 296) describes the reform launched in 1975 as comparable “in thoroughness and impact to the Chinese and Vietnamese reforms of the 1950s”. This is no exaggeration. The Ethiopian reform is the least adequately studied major land reform of the 20th century, in spite of important works by Ethiopian authors such as Rahmato (1984, 1994, 2008) and Akalu (1982).
6. On *chiguraf-gwoses*, see Bruce (1976).
7. The EEA/EEPRI study (2002: xvi) found that 21% of those interviewed had been involved in different forms of informal rural land transaction activities, of which 60% were temporary and 37% were permanent; 80% had occurred since change of government in 1991. The breakdown was sharecropping (44.4%), sales of land (31.1%) and renting land (16%). Only about 5% of farmer households said that they rented in land. The mechanism used for these illegal transfers is the same by which holders under customary land tenure sold their land, contrary to customary rules, observed by the author forty years ago: a purported lease is made accompanied by a substantial payment which recognizes that the seller will not reclaim the land; the seller is usually leaving the community, often for an urban area.
8. In a 2002 survey, EEA/EEPRI (2002: 37) found that female headed households constituted about 5.5% of sample cases. In terms of land/

Perspectives on agricultural productivity, growth and input markets in Ethiopia

by

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1. Introduction

Perhaps the best summary measure of an economy’s progress is the level of productivity (measured as the amount of output per unit of input) it achieves over time. There is ample literature to suggest that raising productivity, and thus improving well-being, remains a fundamental challenge in Ethiopia, particularly in the agricultural sector (see Diao et al. 2006; Taffesse 2006; Dercon 2000). As such, further explorations into the causes of, and possible remedies for, slow productivity growth in Ethiopian agriculture are still a priority. This paper hopes to contribute towards that end by investigating the sources of growth in cereal production in the country, and by examining the priorities and challenges facing agricultural input markets and systems.

A look at the recent state of cereal production in Ethiopia provides an appropriate starting point. Table 1 summarises the performance of the country’s cereals sector in the Meher season during the last four years (2004/05-2007/08). During that period cereal production on average involved 11 million holders. Cereal acreage and cereal output respectively averaged 8.2 million hectares and 12.1 million tonnes. From among the five major cereals, *teff* had the highest share of cereal acreage (28 percent) while barley had the lowest (12 percent). On the other hand, maize accounted for the largest fraction of cereal output (27 percent) with barley accounting for the smallest (11 percent). The highest yield level was attained also in maize production (20.6 quintals per hectare) and the lowest level in *teff* production.

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labor ratio, female-headed households had a large holding size (0.48 ha, as against 0.37 hectare for male-headed households). In terms of landlessness, 16% of female-headed households had no land as against 9.4% of male-headed households. In Tigray, almost all sampled female-headed households had land compared to the 9.9% and 8.3% in Amhara and Oromia regions respectively. In a 2007 survey of land certification (Deininger et al 2008), the level of joint titling in Amhara was relatively high (nearly 80%) while that in Tigray the proportion in the name of the husband only was quite high (over 70%).

9. EEA (2007: 99): “...land productivity declines as the size of the cultivated farmland increases. The result is statistically significant for the two major agricultural regions of the country: Amhara and Oromia. It does not necessarily mean that small farm sizes are preferable. It may imply that farmers with smaller land holdings are more productive due to intensive use of the land.” The final remark is surprising, given that agricultural intensification is the most likely source of increases in agricultural production in a country such as Ethiopia; perhaps the authors were thinking of unsustainable intensification, which of course is problematic.

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ANNEX

The Decision of the CPC Central Committee on a Series of Key Issues Concerning Pushing Forward Rural Reform and Development

October 12, 2008

1. Stabilize and improve the fundamental rural operation system. The double-layer operation system based on household contracting and operation and integrating unification and separation is the fundamental rural operation system adapting to market economic mechanism of socialism and in conformity with agricultural production characteristics, is the foundation stone of the party's rural policies and must be firmly followed. Farmers shall be granted more adequate and secure land contracting and operation rights and existing land contracting relationship shall remain stable and unchanged for a long time. Reform of collective forest rights institutions shall be pushed forward all-roundly and pilot reform of forest rights institutions in state-owned forest farms and key state-owned forest areas shall be expanded. The grassland contracting and operation system shall be stabilized and improved.
2. Strict and regularized rural land management institutions shall be established and improved. The land system is the fundamental rural system. Rural land management institutions shall be further improved in the principles of clarity of ownership, control of use, intensive use and saving of land as well as strict management. Strictest farmland protection institutions shall be insisted on and responsibilities shall be implemented from upper level to lower so as to firmly defend the bottom line of 1.8 billion mu of farmland. Permanent primary farmland shall be demarcated and the protection and compensation mechanism shall be established so as to ensure no decrease in the total amount of, no change in use of and enhance in quality of primary farmland. Land consolidation and reclamation shall be

continuously pushed forward, farmland shall be refilled first and then can be occupied, and the dynamic balance of the total amount of farmland shall not be realized across two or more different districts, cities or provinces. Ownership clarification, registration and issuance of certificates of rural land shall be done well. Land contracting and operation rights shall be improved and farmers' rights to possess, use and profit from contracted land shall be guaranteed in accordance with law. Management and services concerning transaction of land contracting and operation rights shall be strengthened, the market for transaction of land contracting and operation rights shall be established and improved, and farmers shall be allowed to transfer, lease, exchange, assign or join as stock shares land contracting and operation rights legally, voluntarily and in return for adequate payment and develop multiple forms of proper scale farming. In places where conditions permit, specialized operation households, household farms or farmers' specialized cooperatives can be developed to engage in scale farming. In transaction of land contracting and operation rights, collective ownership of land may not be changed, land use may not be changed and farmers' land contracting rights may not be violated. The strictest land saving institution shall be implemented and the total scale of urban and rural construction land shall be tightly controlled. Institutions of rural residential sites shall be improved, residential sites shall be managed strictly and farm households' usufruct rights to residential sites shall be guaranteed in accordance with law. Land saved from consolidation of rural residential sites and villages shall be first reclaimed to farmland, which, if adjusted as construction land, must be in compliance with land use planning, be included in yearly construction land plan and shall meet the requirement of collective construction in priority. Land expropriation institutions shall be reformed, construction land for public interests and construction land for industrial and commercial purposes shall be strictly defined, the scope of land expropriation shall be gradually narrowed and the mechanism of compensation for land expropriation shall be improved. Rural collective land shall be expro-

tems are still changing and they will undoubtedly continue to do so. Hopefully Ethiopian tenure analysts will find ways to continue to compare the evolution of the two systems.

minimum terms and maximum terms but allowing the community to set the lengths within that range. The same approach might be taken to length of sub-leases of the use right. This would provide communities some flexibility to adjust to their particular needs, and give an opportunity for those communities to express their preferences. For communities where there is an opportunity to scale up agricultural holdings, consideration might be given to allowing full assignments (sales) of the use right, initially between resident households, and possibly with some maximum holding size locally decided upon. There are many options for experimentation with gradual adjustments of such systems, and the Chinese experience offers a number of them.

Fourth, the comparison of land registration/certification in China and Ethiopia is important, because the development of low-cost, community-driven processes for registration is a priority for the international donor community. Current models used by donors have resulted in quite expensive projects, and there is a realization that more economical models are needed.

Fifth, legal changes will not always be needed. Here there is a lesson to be learned from Laos. Laotian law does not require joint titles for husbands and wives. Custom in many communities does not dictate it. The joint registrations in Laos were the result of persuasion, of those administering the program explaining to husbands and wives the concrete advantages of joint registration. There may be areas of Ethiopia where this experience is relevant.

Conclusion:

There are structural similarities between the land tenure systems of China and Ethiopia which make it useful to examine the Ethiopian experience in light of that of China and other countries. Of course such comparisons are always imperfect. They do not so much answer questions as to raise them, but we have taken a large step forward if we are asking the right questions. Today, both tenure sys-

priated in accordance with law, reasonable compensation shall be paid to rural collective entities and farmers timely, in full amount and in the principle of “equal price for equal land”, and employment, residential houses and social security of dispossessed farmers shall be well resolved. Outside the scope of urban construction land designated by land use planning, if rural collective land is approved to be used for construction of industrial and commercial projects, farmers shall be allowed to participate in development and operation through multiple channels in accordance with law and farmers’ legitimate rights and interests shall be guaranteed. The uniform construction land market integrating urban and rural sectors shall be gradually established and for rural collective industrial and commercial construction land obtained in accordance with laws, its use rights shall be transferred in an open and regularized way at a uniform and physical land market, and such construction land shall enjoy rights as equal as state-owned land under the precondition of compliance with planning. Relevant laws and regulations as well as supporting policies shall be improved as soon as possible and reform of rural land management institutions shall be pushed forward in a regularized way.

3. Establish and improve the system of rural social security. Social security of dispossessed farmers shall be done well and land cannot be expropriated until social security of dispossessed farmers has been arranged so as to ensure the long-term security of basic living of dispossessed farmers. The system of rural minimum living security shall be improved.

Women and Land: A Comparative Perspective for Ethiopia, with Particular Reference to the Chinese Experience

*Dr. Zongmin Li
January 2009*

Introduction

In the past decade considerable attention has been given to gendered dimensions of land tenure. This paper reviews some key points from that experience, then turns to issues which arise as household or individual security of tenure and marketability of rights and increased liberalizing reforms. In this respect it draws on experiences in post-socialist countries and especially that of China. It looks at reforms to strengthen property rights, including land registration programs. It suggests some issues that may arise in Ethiopia and notes how these are being approached elsewhere.

Gender and Land Rights

FAO has stressed the importance of access to and security in land in the development process (FAO 2002: 3):

Throughout history, land has been recognized as a primary source of wealth, social status, and power. It is the basis for shelter, food, and economic activities; it is the most significant provider of employment opportunities in rural areas and is an increasingly scarce resource in urban areas. The willingness and ability to make long term investments in arable land and in housing is directly dependent on the protection that society affords the holders of rights. Thus, any concept of sustainable development relies heavily on both access to property rights in land and the security of those rights.

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household's farmland unilaterally, without getting the consent of his wife. The dangers will be readily apparent. On the other hand, women in China are now using earnings from off-farm employment to purchase land use rights, more often urban rather than rural land, but this trend can be expected to grow. Reforms to ensure that spouses must consent to land transfers are clearly needed, and to the extent that markets in land rights in Ethiopia are liberalized, this should be a priority reform there as well.

Third, these questions need to be examined in relation to the different economic contexts in which they arise. In China the flow of husbands' labor into non-farm work and the feminization of agriculture are significant trends, while in Ethiopia they seem much less pronounced. In China, in areas where agriculture is important, this change has led to a significant shift in agricultural decision-making to wives. This has set up a tension between their lack of property rights in land and their growing day to day control of farming decisions. This tension seems less evident in Ethiopia.

At the same time, in some areas agriculture is no longer a major source of economic wealth. Agricultural production and access to land for agriculture has become less important in some areas, and a less profitable use of land. Much land in agriculture in the peri-urban areas of China is being kept in agriculture by Central Government's insistence of preservation of farmland. In these circumstances, labor input into agriculture may decline and be focused more on providing household food supply than marketed output. Often those managing the land are not wives but grandparents.

These situations are diverse. Inheritance rules, even good rules, are rather mechanical and sometimes confer land on those who do not need it, and should be able to transfer it. Women who acquire land use rights will have a particular need for security and for options for deriving reliable income from their land. In this case women's needs may only differ in degree from those of other land right holders. Ethiopia might consider an approach comparable to China, setting

At the same time parents (including women who do have land of their own), faced with a choice between leaving land to a son who lives in their village and a daughter who has moved away to her husband's village, may leave the land to the son. If this trend developed, it could result in the gradual reduction of direct landholding by women.

Some basic options for remedial action, not mutually exclusive, are:

1. Emphasize the right of young women to inherit land in their parental village, which may prove difficult given the need for land for male siblings still resident there;
2. Provide that a wife upon marriage acquires an interest in the husband's land, even that acquired before marriage, and
3. Strengthen inheritance rights of daughters and widows and marital property rights of divorcees.

On the first point above, it may matter whether or not dowries are paid. It is not clear to me to what extent this is the case in Ethiopia. In China, where dowries in China's rural areas are substantial, this is often taken as the daughter's share in the inheritance. This makes it especially difficult for the daughter to insist that her brothers should share the parental land with her.

It is important to acknowledge that women, even if an end to reallocations have negative implications for the extent to which they hold land in their own name, do benefit as members of the household from the greater security of tenure provided by the end to reallocations.

A second fundamental issue is how women will be affected if land use rights become more transferable. This is happening in China, and there are two sides to the question: a) the impact of possible transfers by husbands on their wives and children, and b) the pluses and minuses of transfers by women of land use rights they hold direct. In China, the husband is the only person whose name appears on the land use contract, and this allows him to transfer the

It is in light of this importance of access to and security in land that we must assess the impact on women of the disadvantages in this respect to which they have historically been subject across a wide range of countries and economic systems, and continue to experience today in many countries.

Property rights in land around the world are unevenly distributed. At the end of the century, the German aid agency GTZ (GTZ 1998: 145) and Seager (1997: 76) concluded that women world-wide owned only about 1 percent of all land. The Women's Summit in Beijing in 1995 found that in most of today's societies, there are great gender inequities in access to land, housing and basic infrastructure. This is a human rights issue and, as the UN Economic and Social Council Commission on the Status of Women states, "land - rights discrimination is a violation of human rights" (FAO 2003).

In many countries, there is still a lack of adequate provisions for women to hold land rights independently of their husbands or male relatives. Statutory law often does not provide for women's independent rights and when such legislation does exist, mechanisms to enforce it are often absent. In traditional or "customary" societies, women's direct access to land through purchase or inheritance is often limited, yet they may have greater management and use of land than men. Since women are frequently the major household food producers, there are usually customary provisions for indirect access to land in terms of use rights acquired through kinship relationships and their status as wives, mothers, sisters, or daughters.

African customary land tenure systems have often been cited as examples of such long-standing discrimination against women, rooted in patrilineal social structures. A typical discussion is Tsikata (2003):

Where we tend to see patrilineal societies bequeath land only to male members of the family, matrilineal communities tend to bequeath to both male and female members of the family. In areas

throughout central Africa, where matrilineal descent is highly concentrated, the villages also tend to be matrilineal, with women living in their home villages after marriage. These areas tend to see a higher incidence of female retention of land ownership after marriage or through inheritance. Eastern African countries, including Kenya and Tanzania, have an entirely different cultural foundation regarding land ownership. Under the house-property systems of these areas, a husband may have several wives, yet must provide some portion of his cattle, farmland, and homeland to each wife. In this scenario, each wife maintains control over the property, conditional on her bearing sons. Although the wife does not own the property in the technical sense, such as with a land title, she does have veto power over the husband's decisions regarding her property. In addition, it is customary in many house-property communities for the husband to offer property as compensation upon divorce. Although the house-property system appears to offer women greater control over land in some areas, it must also be mentioned that most customary law throughout East Africa is patriarchal, with rights of women limited to their status as daughters and wives, rather than individual members of the community. A woman's inheritance rights to land may be weakened by claims made by male relatives of her deceased husband, or by claims made by her brothers to her father's property.

While women may have use rights during the marriage, these rights usually do not grant enough security for women and other dependants when traditional family structures dissolve. Through labor mobility, divorce, separation, or death, an increasing number of women are becoming de facto heads of households. They are thus making many of the day-to-day decisions affecting shelter, food production, and household economics. Yet only a small proportion of these women hold secure land rights.

These are long-standing issues, but there are other concerns, driven by more recent developments. The fact is that the land access and security of tenure position of women in many parts of the world is

parcels now being piloted in China.

- While China's legal regime for marital property is uniform nationally, for instance refusing to allow or recognize polygamy, the federal system in Ethiopia appears to be allowing a degree of experimentation with different approaches, and cultural diversity among regions seems to be one determinant of those different approaches.

It is clear that in some respects, Ethiopia has moved further to create and protect property rights of women than has China.

Issues

The most fundamental issue, faced by both China and Ethiopia, is how to avoid new landlessness for women as reallocations become a thing of the past. Without periodic reallocations, young women marrying into a village will not receive land there, either in their own name or for the household, in recognition of the addition of their labor to the household. This is a pressing issue in China, because reforms to lengthen use terms and end reallocations have gone much further there. It is clear that in the future, access to land will be governed by the mechanisms of inheritance and the market in use rights.

The prospect, a worrisome one, is that if reallocations end without remedial action, young women will lose land rights when they move from parental villages and not get land rights in the husband's village. It is sometimes suggested that all young people, both men and women, are disadvantaged in getting early access to land when reallocations end and access takes place largely through inheritance. This misses the point: virilocal residence patterns mean that daughters are disadvantaged in inheritance in practice, whatever their legal entitlement. Sons, forced to rely on inheritance rights to get access to land, are better positioned than women because they, much more often than women, reside in their parent's village, where the land which they could inherit is located. A daughter has usually moved away from her parental village, and will find it much harder to inherit land there.

were and are still in the name of heads of household. Several Ethiopian regions have more recently moved to allocations to husbands and wives as individuals, and provided for allocations even to unmarried women.

- In both cases, women have had to rely to a large extent on access to land in their husbands' villages, since most wives move away from their parents' villages to that of their husbands, and have trouble retaining land rights in the parental village. In China, if they are allocated land in the husband's village, they must give up land they hold in the parental village. This is also true under some regional laws in Ethiopia.
- In regions of Ethiopia where married women receive land of their own, they may be benefiting in terms of 1) influence in household decision making, 2) marital stability, and 3) better access to land upon divorce or widowhood. To the extent that these benefits are materializing, they are in a position preferable to that of most Chinese women. There are however doubts to the extent that (1) is materializing.
- In regions of Ethiopia where married women do not receive land of their own, the situation is more parallel to that of China, with women lacking land of their own and therefore being particularly vulnerable to landlessness in cases of divorce or widowhood.
- In both China and Ethiopia, as periodic reallocations are ended, women marrying and going to a husband's village find it ever more difficult to get land of their own there, or even (in the China case) for their husband to get additional land in recognition of their presence.
- The process of land certification in Ethiopia has been equitable for women to the extent that their tenure rights are equitable. Its systematic nature has meant that poor women have benefited equally with others. The contracts for rural land use in China are unfortunately in the name of the household head, usually the husband. It is not clear yet how far this will change as a result of the registration of

worsening. The new focus on poverty alleviation in development strategies has highlighted these, because changes are taking place which are casting more and more women into vulnerable populations. In many parts of the world, women who once had access to land as part of households find their access threatened by change. Growing urban migration of male labor has led to what has been referred to as the "feminization of agriculture" without a corresponding increase in their property rights. War and other conflict have contributed to the same feminization, and to higher rates of divorce and larger percentages of female-head households.

New problems have also arisen in many post-socialist and post-collective societies in East and Central Europe and Central Asia. Following the dismantling of the collective enterprise, where household landholdings are divided among former members of the collective, the holdings tend to be constituted based on the labor force or size of household. Each member counts. But in the end, the titling of the land is most often in the name of the husband, as head of household, leaving the spouse effectively without land rights (Saxena 1993; Quisumbing *et al.* 1995). Examples of this trend can be found in transitional economies ranging from Russia (Bridger 1992; Holt 1995) to Albania (Lastarria-Cornhiel and Wheeler 1998). A recent comparative study by Tinker and Summerfield (1999) noted similar problems in China, Vietnam and Laos.

FAO has estimated that worldwide 40 percent of the economically active population in agriculture consists of women (FAO 2003: 2), while in countries in East and South Asia the percentage is substantially higher. Rural women in particular are responsible for half the world's food production and produce between 60 and 80 percent of the food in most developing countries. In sub-Saharan Africa and the Caribbean, women produce up to 80 percent of basic foodstuffs. In Asia, between 50 and 90 percent of the work in the rice fields is done by women. After the harvest, rural women in developing countries are almost entirely responsible for storage, handling, stocking, marketing and processing.

It is no longer adequate – in fact, it never was – to assume that women’s property rights and their incentives do not matter to agricultural production. Agarwal (1994: 572) classifies the arguments on impacts into three broad categories:

1. *The productivity argument:* Women who have the incentives associated with secure access ensured by property rights will make better decisions about investment and good husbandry of the resource, and will have better access to credit and services.
2. *The welfare argument:* Women, especially women whose households have disintegrated due to divorce or widowhood, fall into poverty without access to land. Land produces for markets, but also has a social security function.
3. *The empowerment argument:* Women who have equal rights to land will be empowered economically, socially and politically, both within their households and their communities.

What data do we have that established the importance of land and property rights for women? The data is not as broad or comprehensive as could be wished, but some good studies exist.

Consider the impact on women farming as wives in male-headed households. Land ownership clearly confers direct economic benefits as a key input into agricultural production, as a source of income from rental or sale, and as collateral for credit that can be used for either consumption or investment purposes. Depending on the norms governing intra-household decision making and income pooling, women may not fully participate in these benefits if they do not share formal property rights over the land; only independent or joint ownership can assure women access to control over land-based earnings. Comparative analysis of data from Honduras and Nicaragua, for example, suggests a positive correlation between women’s property rights and their overall role in the household economy: greater control over agricultural income, higher shares of

certificates were in the name of the husband only, while 51.86% were joint, and 11.12 % were in the name of the wife. There were wide variations, with Tigray exhibiting the highest level of husband-only certificates (70.51%) and Amhara a much lower (8.58%) level, the difference being accounted for primarily by a much higher level of joint titling in Amhara. There appears to be a lack of consistent practice, though the regional land laws both provide for equal land rights for women.

- In polygamous areas of Southern Ethiopia land certificates can be issued jointly to husbands and wives, or the husband’s name can be included below the name of his second and later wives, while he has his name first on the certificate with his first wife (UN-HABITAT 2008).
- As the importance of reallocations decline, the role of inheritance law is becoming more important but there seems to be considerable confusion about the inheritability of land use rights generally, in practice if not in law. Women, who usually move away from their parents’ village and land to their husbands’ village, have difficulty in realizing inheritance claims. Whether women’s landholdings will be inherited by sons or daughters has important implications for future female landholding (Mekonnen and Mituku 1999).

Some Comparisons

How far do the gendered dimensions of Ethiopian and Chinese land tenure resemble each other, at least structurally, and how far do they diverge? The diversity in Ethiopian regional approaches make generalizations difficult, but:

- China’s HRS allocated land to households according to labor capacity, including that of women, while the original 1974 reform in Ethiopia was based on an equal amount of land for each household. This has remained the basis for household allocations of land in China, but HRS contracts

on their parents (Tadesse 2003). The final draft (2002) of a land law for Oromia Region likewise provided for equal rights to land for men and women, but Oromia and the other regions (other than Tigray and Amhara) have not had land redistributions to implement that principle, and in most of those other regions land remains allocated largely to households (Rahmato 2003).

- The Constitution of 1994 affirms that women have equal rights with men with respect to access use, administration and transfer of land, as well as in inheritance of land but the gap between the law and practice remains substantial (Tadesse 2003).
- Land administration structures, including local land committees, remain dominated by men, including those in connection with the land certification program (UN-HABITAT 2008; Oromia alone has provided in its land law that women must be represented on these committees (Rahmato 2003).
- Women whose land is not farmed by a husband often give it for share-cropping, due to lack of oxen or labor for them to farm it directly (Mekonnen and Mituku 1999), Tadesse 2003). “Land loans” are favored by women-headed households that have rights to land as well as by elderly households or households constrained by lack of labor. In the face of prohibitions on sales of land use rights, marriage endowments are sometimes used to accomplish land transfers (Rahmato 2003).
- In current land certification programs, begun in 1998, women with holdings of their own have these certified separately, and receive certificates in their names. In regions where land is simply allocated to the household, husbands and wives may be certified jointly. The systematic quality of the certification program means that even poor women receive this service, so in this sense the program has been gender-neutral (UN-HABITAT 2008).
- Deininger et al (2008) found that nationally 35.8 % of

business and labor market earnings, and more frequent receipt of credit (Katz and Chamorro 2002).

In addition, female landholdings appear to affect the shape of household expenditures, reflecting a greater role for women in household decision-making. Data from Central America, for example, have indicated that greater female landholdings are associated with modest increases in food expenditures and child educational attainment, controlling for other relevant household characteristics and unobserved preferences, with elasticities in the 0.01–0.05 range (Katz and Chamorro 2002). Quisumbing and Maluccio (2002) also found a positive relationship between the amount of assets (including land) that a woman possesses at the time of marriage and the shares of household expenditures devoted to food, education, health care, and children’s clothing. Even beyond increasing bargaining power within the household, land rights may empower individuals to participate more effectively in their immediate communities and in the larger civil and political aspects of society.

In addition to the short- and medium-term economic gains generated by greater access to product, capital, and land markets, women with stronger property rights in land are also less likely to become economically vulnerable in their old age, or in the event of the death or divorce from a spouse. In her study of gender and inheritance in rural Honduras, for example, Roquas (1995) found that widows (and women landowners, in general) are more likely to work their lands indirectly, relying on some combination of hired labor, family labor, and as collateral for loans for nonagricultural undertakings.

Finally, land is one of the few vehicles through which elderly women can elicit economic support from their children, either in the form of labor contributions to agricultural production or cash or in-kind transfers. In the absence of other forms of social security, the elderly rural population relies heavily on intergenerational transfers for their livelihoods; and children are more likely to contribute to their parents’ well-being if the latter retain control over a key pro-

ductive (and inheritable) resource such as land (Lucas and Stark 1985).

Land is a particularly critical resource for a woman in the event that she becomes a de facto household head as a result of male migration, abandonment, divorce, or death. In both urban and rural settings, independent real property rights under these circumstances can mean the difference between dependence on natal family support and the ability to form a viable, self-reliant, female-headed household. Indeed, women's land rights within marriage may afford them greater claims on the disposition of assets upon divorce from or death of their spouses, as Fafchamps and Quisumbing (2002) found to be the case in rural Ethiopia.

While the discrimination women face is often enshrined in statutory or customary rules, such discrimination is often grounded in deeper cultural values and practices such as patrilocal residence, which moves the wife away from her parents land. This means that whatever the pace of legal reform, real change on the ground tends to be gradual and requires not only legal reforms but strong educational and enforcement measures. One of the contexts within which development planners are seeking to strengthen is land registration/certification. There have been some successes in this area, but in other cases registration appears to have worsened the position of women. Since Ethiopia is in the midst of a certification program, the experience with those programs is worth examining here.

Women in Land Certification/Registration Programs

Lastarria (2003:1) summarizes the reasoning behind these programs:

Formalization of property rights through land titling and registration guarantees state support for the landholder in his/her claims. Other expected positive development effects of titling production (and consequently higher income for smallholder families) through improved access to factor markets. Formalization of land rights for women

more clearly in finding ways to assist women that are consistent with ever longer land use contracts, their automatic renewal and their growing transferability. Women must be enabled to seize opportunities posed by expanding private rights in land and the liberalization of land markets, to deal prudently with land they control and to enter those markets to acquire land, not just as sellers.

Gender and Land in the Ethiopian Land Reforms

A survey of the literature cited in the section below suggests that the tenure position regarding landholding by women in Ethiopia is as follows:

- Prior to the reform processes begun in 1974, the predominant land tenure system of northern Ethiopia, the *rist* system, allowed inheritance of land by both sons and daughters, though in fact most land moved in male lines, due in part to virilocal residence patterns (Fafchamps and Quisumbing 2005). In areas further south, patrilineal inheritance of land and virilocal residence prevailed and the situation was closer to that described in the literature on women's land rights elsewhere in Africa elsewhere (Teklu 2005).
- The 1974 Dergue land reform allocated land to households (Tadesse 2003), giving effective control to male heads of households. Gender equality was pioneered at the local and regional levels, beginning with land reforms starting in 1978 in areas of Tigray liberated from Dergue control by the TPLF which allocated land to husbands and wives individually. This right was extended to unmarried women in 1987. (Mekonnen and Mituku 1999). Since 1987 this has been the position in Amhara Region as well, though allocations there to single women are said to have been limited to those with income-generating activities and to have neglected divorcees, widows and single adult women still dependent

- progress) under the RLCL.
4. Government should re-declare at the highest level its commitment to the principle of gender equality with regard to land. It should follow through on this by undertaking well-publicized gender-and-land equity audits, and punishing local officials where there are failures to enforce existing law.
 5. Government must rethink its primary reliance on women retaining rights in their natal villages, and adopt proactive policies requiring instead that they receive land in their village of marriage. This can be accomplished without unduly disturbing existing landholders through the creation of a substantial reserve in each village for this purpose.

It is striking that the 2007 Property Law and the 2008 Decisions by the Central Committee contained no further measures in response to these many proposals.

As many advocates realize, the major need is to change perceptions and behavior. The critical activities will be building the consciousness and will of women on these issues, creating networks to support them, and sensitizing officials to the justice of their demands. This will need to be done locality by locality, because as suggested earlier, the power to determine many of the outcomes lies in the hands of local governments. Education and advocacy will play critical roles, but in the end, it is the enforcement of national norms of gender equity that may prove most difficult. Local authorities have great control over land, and are often able to ignore national law. District and provincial officials and the courts are not yet ready to take seriously gender equity with regard to land, and for the most part reject women's complaints out of hand.

Today, in the light of the 2007 Property Land and the 2008 Central Committee decisions, it is clear that much energy was wasted by women's advocates in efforts to preserve advantages for women of the old administrative land reallocations. The strategic path now lies

should not only protect women's access to and control of land and facilitate access to production factor markets, but may benefit them in other ways as well; recent research suggests that property ownership increases a woman's bargaining power within the household and her status as a citizen in the community. Numerous titling and registration programs have been implemented in Latin America,

Numerous titling and registration programs have been implemented in Latin America, Africa, Asia, and Eastern Europe as a necessary measure to ensure the property rights of smallholders and increase their access to other production factors, particularly credit.

Simple registration programs simply record and confirm existing rights, but titling and registration programs confer rights. They may confer a new title granted by the state or recognize customary rights that have not previously been recognized under national law. Titling and registration programs are thus often vehicles for tenure reform, and can affect women's rights positively or negatively. In fact, a major criticism of titling programs and formal property rights institutions (such as property registries), has been their tendency to grant title for family/household property (land or housing) to just one person in the family/household, usually the male head of household. Equity in access to land titling and registration should ensure that the claims of smallholders and marginal groups, such as women, carry the same weight and are afforded the same legal protection as other landholders. This protection is particularly critical in situations of conflict, rapid social or economic change, or when property values escalate.

A World Bank review of titling projects (World Bank 2005) concluded that the adjudication process is critical to protecting the rights of men and women. This process consists of a number of steps, although each project may adjust the order and methodology to suit local needs or the aims of the project. These steps include information campaigns (which are discussed in the final section of

this chapter); collection of information on the rights, rights holders, and location of the rights; provision of public notice (particularly in systematic registration) and registration of the interests; and dispute resolution. In land administration projects, the type and nature of the information collected are usually determined by laws, regulations, and project procedures. However, they can be classified as information about the nature of the rights (including duration, if based on possession, and sometimes land use, occupancy, or value), and information about the location and boundaries of the rights.

The World Bank study notes the variety of experience and the implications of certain practices: “In Bolivia and most Latin American projects, crucial pieces of evidence are personal identification documents that many women do not have or cannot easily obtain. In Cambodia, where systematic titling took place (for example, for an entire village at the same time), each house was visited and neighbors, as well as family, attested to the identity of rights holders. The report notes that while this will not guarantee that communities will identify all stakeholders (for example, a daughter who now lives in the city but may have some legal interest), at least the process allows identification and registration to proceed without bureaucratic delays.

Lastarria (2003: 2) notes some key problems with titling programs from a gender perspective:

Titling programs, in their design and implementation, do not target women for numerous reasons. Laws regulating formal adjudication and registration of property rights often are written in the masculine form or speak of “household heads” which, in practice, translates to “men”. Other laws related to property rights and management (e.g., inheritance and contract or tenancy laws) sometimes explicitly favor men. In addition to these explicit or implicit legal constraints, processes associated with implementation are, at best, more difficult for women to traverse than for men: socio-cultural norms do not perceive

possibly with a right of first refusal for the other household members.

While there are significant differences in approaches to strengthening women’s land rights as among countries, protection of women’s land rights are achieved through some combination of (1) broad recognition of land acquired or held by the household during marriage as marital property, co-owned with the wife; (2) the guarantee of a substantial share in the inheritance of that property by the wife as principal heir, in the event of the death of the husband, and (3) on divorce, equal division between the husband and wife of the land classified as marital property (Cunningham *et al.* 1993: 187–199; Glendon 1989: 120).

In addition, steps need to be taken to rectify the landlessness of women that has resulted from the discriminations of past years; this could be accomplished by legislation that clarified that a household allocation received by the husband before marriage is nonetheless jointly owned with a wife he subsequently marries. Such legislation should similarly give the husband joint ownership of a wife’s land, if any. These reforms would align the position in China with that in many legal jurisdictions in Europe and the United States.

Li and Bruce (2005: 328) concluded that as important as these legal reforms are, there are equally urgent needs on other fronts:

1. A major effort is needed to realize the promise of the new Rural Land Contracting Law through implementing regulations. Already, local and provincial regulations may be establishing best practices in this area.
2. Supporters of women’s land rights need to develop programs that provide legal, financial, technical and social assistance to women seeking to enforce their rights.
3. While landlessness among women is already of concern, there is danger that it will continue to increase. Government and research institutions must invest seriously in the monitoring and evaluation of progress (or lack of

should also benefit from the clarification that the principle of equal treatment for women applies to land contracting. The challenge will be to enforce the provisions of the law, to monitor the effectiveness of the new law, and to work to address unresolved issues, including that of women who became landless prior to the enactment of this law.

Further Reforms?

In the discussions leading up to enactment of the 2003 RLCL, different legal reform strategies were put forward. Some proponents, including the All-China Women's Association, tended to focus on preserving the right of villages to carry out readjustments to give women access to land. But it is clear now that government is strengthening long-term land rights; ways need to be found to promote women's access to and rights in land that work within that context. Are further legal reforms needed? This is, after all, as Lin (2001) pointed out, a constitutional issue. Women must receive the treatment to which they are morally and constitutionally entitled. Most legal commentators, such as Duncan and Li (2001: 47–48) and Chen (1999), focus on realizing the promise of Article 30 in the new Rural Land Contract Law by making partition and sale of the woman's share in the parental holding easier and ensuring that women receive the money so that they can rent land in their husbands' village.

Jennifer Brown of RDI (2003) proposes implementing regulations under the new law, and identifies a number of opportunities. She suggests promulgation of both national and provincial regulations that require that every land use contract must specify, consistent with the new law, that:

- The contract must be signed by both husband and wife.
- The land use right cannot be sold by either the husband or wife alone, without the consent of the other.
- The land use right must be partitioned if a household member requests partition.
- After partition, a right-holder may sell his or her share,

women as full and equal participants in the economy and have not yet adapted to modified legal structures. Titling programs and other land access programs are often staffed by men who do not share the vision of gender equity and, thus, do not target or facilitate women as legitimate clients and property holders. And, women sometimes lack the skills and confidence to approach institutions that have traditionally been the domain of men.

Giovarelli et al. (World Bank 2005) summarize their review of the practice in “one-titleholder-per-household” registration:

- Titling guidelines do not call for the identification of more than one property rights holder in the household;
- There is often not a serious inquiry into the number of property rights holders in the household, but instead an assumption that all rights are held by the household;
- Titling forms do not permit the listing of more than one property rights holder;
- Titling brigades are not trained to look for and identify more than one property rights holder; and
- Titling activities with communities and households (informational meetings, workshops, and so forth) focus on the male heads of household and do not encourage or facilitate the participation of other people, including women.

As a response to frequent titling of male household heads alone, joint titling has been often recommended. The basic idea is that instead of titling just one person (usually the husband/father) in the household, both husband and wife are given joint title to landed property.

Joint titling has been recommended as a means of targeting women and ensuring that their name is included in the title documents for lands acquired by the family. The three rapid appraisals of joint

titling efforts carried out by Lastarria and her colleagues (2003: 68-69) suggest that joint titling often confronts the same difficulties and constraints in extending property rights to women that “traditional” (titling only one household head) titling programs do. While specific legislation, regulations, and procedures that focus on women’s rights to land are needed to title women both as individuals and as joint titleholders, cultural constraints to recognizing women as full citizens, with the same and equal set of rights that men enjoy, tend to undermine those efforts. All three cases, they note, showed that the better informed landholders are about titling in general and joint titling in particular, the more receptive they are to the notion of women’s rights to land.

Laos: A “Best Practice” Case of Joint Titling

It is helpful to examine the experience in one country identified as a “best practice” in gender-conscious land administration, described in a World Bank publication by Li (2003). The Lao government has engaged in the systematic survey and titling of land use rights in urban and peri-urban areas of seven provinces since 1993. Titling provides security of tenure and improved access to credit markets as land can be used as collateral. Women landholders should benefit from this program as much as men, as they comprise 51 percent of the population and 53 percent of the agricultural labor force. Under national law, men and women both can hold landed property, and the Family Law specifies that any property purchased during marriage is regarded as joint property. Land owned by a woman prior to her marriage remains her individual property, as does any land she inherits from her parents.

But women were disadvantaged in early titling work, in which their customary rights had to be proven largely through oral testimony of their kin. Women suffer a high rate of illiteracy (more than 75 percent), have a heavy workload within the family, and a lesser role in public affairs. As a result, they often do not have the time, or understand the need, to participate in land adjudication and titling processes.

residence where she cannot get land.

Article 30 does little to help young women to obtain land rights in their new husbands’ villages, but it does seek to protect the land rights of young women in their parental village when they marry and move away, at least until such time that they receive land in the new village (the present law suggests that they will rarely receive land in the new village). It may be effective in protecting these rights against village officials, but can it protect them against appropriation the young woman’s parents and siblings? The benefits women actually derive from this provision will depend upon the extent to which their families recognize that their daughter retains an interest in the household land, and allow her to derive benefits from it. Lin (personal communication, 2003) worried that “women’s claim to their land rights runs against the interest of their family, including father, brother and mother, and means a rebellion against the patriarchal system, a cut-off of the kinship ties . . . women who are ready to do so are unlikely to succeed in practice, because it is unlikely that they will get any legal support.”²⁴

On the other hand, Article 30 is potentially very helpful to widows and divorcees. There is a need for appropriate enforcing regulations that address more specifically how land distribution should be handled following a divorce. One ambiguity needs clarification: does “her land” include land acquired by the husband prior to the marriage?²⁵ Finally, the new law does not address the problems of women who have already lost their land rights through discriminatory acts in the last decade, and especially in the second cycle of reallocations in the late 1990s. Will they have no remedy, at least until a possible next round of readjustments after the end of the current 30-year term? This is a major failing of the new law. The studies cited earlier in this chapter suggest that there are substantial numbers of women in this position.

The Rural Contracting Law is still an important *legal* step forward for women. Women will benefit as members of households from the greater security of tenure it creates for those households. They

pioneer of property rights reform in China and the former director of the late Research Center for Rural Development of the State Council (Lu and Chen1999:9).

Equality is important, and so the law gives women equal shares with men. But from an efficiency standpoint, it is important that we do not adjust the landholdings too often. That's why when a village distributes land they should not make assumptions about whether women will eventually stay or leave their home village; it should be done strictly according to the present population. That's consistent with the Government's guaranteeing thirty-year land rights, giving people the security they need in land. I have learned that there are three situations in which women's land rights are in danger: (1) married women, when they move in; (2) when women marry non-rural residents but stay in the rural areas, and (3) when women are divorced.

How to solve this problem? Women, once they marry and move away, should retain their plot in their village of origin. Women who marry urban residents, if they still live in the countryside, should have a right to land. Divorced women should keep their existing residential registration and land use rights. These women must have the right to transfer their use rights to others, but they should not be forced to do so. After land has been distributed, and before any new adjustment, women in these situations should not receive new land. The only way land should be shifted from one person to another is by voluntary transactions. The RLCL follows this pattern, stipulating in Article 30: When a woman marries during the contract term, the contract-issuing party cannot take back her original contracted land unless she receives land where she moves. When a woman is divorced or widowed, the contract-issuing party cannot take her land back if she still lives at her current place of residence or moves to a new place of

Since 1995 the Laotian government has sought to address the land use rights and inheritance issues affecting women. The Laos Land Titling Project I has integrated gender-sensitive strategies into its implementation in urban and associated village areas in six provinces, where both matrilineal inheritance and patrilocal residence prevail. The overall objectives of the project are to foster the development of efficient land markets, and to facilitate domestic resource mobilization by providing a system of clear and enforceable land use ownership rights, and by developing a land valuation capacity. The project focuses on development of a legal and policy framework for land management, land titling, valuation, and administration.

The Customer Relations Service of the Department of Lands worked with the Lao Women's Union (LWU) and its nationwide network of branches and members to ensure women's titling rights in project implementation. They have developed a training curriculum to reduce gender bias among field teams and village authorities, and produced posters and brochures on land rights for targeted villages specifically for women. They have written weekly news bulletins on activities of the land titling project for radio and newspapers, and performed a drama on women's titling issues on television.

In the field, the LWU works closely with local women through a series of meetings: a "whole village" meeting, women's focus group meetings, and household group meetings. These meetings have reached 2,285 people, almost one-half of which were women. In the meetings, the LWU communicates information with regard to women's rights under the land law. Women are urged to make sure they get their names on titles where appropriate, and to participate actively in all stages of the adjudication and titling.

The proposed Second Land Titling Project will be the second phase of the long-term land titling program. It is aimed at the development of the land administration capacity to support the country's economic development and poverty reduction goals.

The number of land titles under women's names or in joint names with their husband has increased. In areas where the systematic titling project is operating, 34 percent of titles are in the name of women, 38 percent are in joint titles, and 24 percent are in the names of men. In areas of the country outside the project area, 15 percent of land titles are in women's names, 28 percent in joint titles, and 56 percent in men's names. Women's names on the titles are defensive measures, protecting them in the event of a change of family status through marriage or divorce, and from arbitrary decision-making by a husband over the disposition of the wife's lands or conjugal lands.

Women are using their new land titles to secure credit. In the project areas it was found that among those who mortgaged land, 51 percent were men and 49 percent were women. Women have both the tenure incentive and the credit to invest in sustainable land-management practices and productive activities, which increase household incomes and expand the local economy.

This experience in Laos points up the role that land registration can play in implementation of women's land rights. Systematic joint titling and registration makes the point to each and every household that women now have rights in land, something a mere legal change would not have accomplished.

In fact, the comparative experience shows that it is important not to expect too much from legal reforms alone. Typically, there may exist multiple barriers to women's ability to translate formal land rights into the kinds of economic and social access discussed above, including gender-specific social norms that circumscribe women's economic activities and decision-making roles, as well as discrimination in the markets for land, labor, and capital. Where enhanced property rights have the potential to generate positive outcomes for women, these must be complemented by initiatives in areas such as education, reproductive health, and political representation in order to realize their full potential for reducing gender inequality.

their sense of self-worth (Li and Bruce 2005).

The Rural Land Contracting Law

An attempt to address these issues was made under the Rural Land Contracting Law, which went into effect in 2003. The Agricultural Group in the People's Congress managed the drafting of this law, and as the work proceeded, consulted the All-China Women's Federation, various Chinese research institutions, and foreign advisors on gender issues. The law is a further important step towards security of tenure for¹ China's farmers, and attempts to address the gender issue in landholding. The RLCL provides in Article 6 that men and women have equal rights in contracting rural land, which would seem to prohibit discrimination such as girls counting for less than boys in the allocation of land to households, women their land rights liable for their actions, and subject to civil and criminal penalties.

But the main thrust of the new law is to affirm the primacy of contracted rights and protect them from readjustment. The only circumstances in which Article 27 allows readjustments are "where a natural disaster has seriously damaged contracted land and other special circumstances." Women marrying into a village would obviously constitute no such special circumstance. The RLCL also allows, however, for certain land to be used for "readjustment of contracted land or contracted to newly added population within the village" (Article 28). This land is "flexible land" that has been reserved by the village collective in accordance with law, and lands reclaimed or voluntarily returned by contracting parties. However, under Article 27 even such limited readjustment requires a two-thirds' vote in village institutions and subsequent local government approvals. The key issue regarding women's land rights, however, is where, in light of the end to readjustments, women can look for a right to land of their own.

The general approach of the new law to this issue was presaged in a 1999 interview in the *China Women's Daily* with Du Runsheng, a

not have an equal say in management of the land even then, but they did not consider themselves landless. When a bride moved to a village to join her husband, their land allocation would be increased at the next reallocation. Land use certificates for agricultural land were however generally in the name of the male household head. While no national data is available for the land held in the name of women in China, Duncan and Li in their study in Hainan found that none of the women interviewed had their name on the land use contract. "Each of contracts was signed by, the male head of household only." (2001: 34)

With the great reduction and ultimate phasing out of periodic reallocations of land in the reforms since the last 1990s, the system has largely lost opportunities to accommodate changes in family size. When young women move to their husbands' villages at marriage, they might wait many years before their presence was recognized by an increase in land allocation, and increasingly their presence is ignored. These women became a part of China's new landless, as they no longer had land of their own. While the reforms of the 1990s benefited them as members of households, it reduced their say within the household and left them vulnerable in divorce and widowhood.

Key life events focus attention on the development of landlessness. At marriage, the young woman who leaves her natal village effectively gives up access to land in the natal village. Increasingly, she no longer received land in the village of marriage to replace that loss. This loss did not mean loss of access to land, since she still had access to the land of her husband's allocation to farm, but at divorce or widowhood, lack of a right to land of her own could rapidly become lack of any access to land.

There is concrete evidence that this landlessness is affecting the welfare of women and their families, reducing food security and incomes and making these families prone to falling into poverty. Equally important, lack of land undermines women's position in the household and society, reducing their role in decision-making and

Gender and Land in the Chinese Land Reforms

The HRS Reforms

During the period of collective farming, gender issues relating to land received little attention for the obvious reason that not even men had rights in farmland. This began to change in 1978, when the Household Responsibility System (HRS) reforms initiated the return of China's farmland to households and gradually increased their freedom to make production decisions, and strengthened their use rights.

In the late 1990s, researchers and women's groups in China began voicing concerns about growing landlessness on the part of women. As with other countries-in-transition, at the same time that the role of women in farm operations was increasing over the 1990s, women's access to land in their own right was decreasing. Researchers and policymakers became concerned that a new class-based poverty was emerging in the form of a class of asset-poor women (Zhu and Jiang 2000: 11). They argued that recent legal reforms in the rural land tenure system to increase household security of tenure, while gender-neutral on their face, had the effect of discriminating against women. This appeared to be taking place in spite of the sweeping guarantees of gender equity in Chinese law, not only in the Constitution but in more specific legislation such as the Law on Protecting Women's Rights and Interests, which mandates equal rights to property for women (including equal rights to farmland) and protection for women's land rights in cases of marriage or divorce.

Under the HRS, household allocations of land depended on the amount of labor in a household. Women who headed households could receive their household allocation, though there is some evidence that they received less than male-headed households. In families headed by a husband, the wife or daughters increased the household's land allocation, and women felt like partners in the landholding, even if they did not have their own parcels. They did