

Working Papers

**LANDHOLDING AND HOUSEHOLD DEVELOPMENT:
WHAT DO WE KNOW?**

**Min Zhan
Michael Sherraden**

**Working Paper No. 98-2
1998**



Center for Social Development



Washington

WASHINGTON · UNIVERSITY · IN · ST · LOUIS

George Warren Brown School of Social Work

Landholding and Household Development: What Do We Know?

**Min Zhan
Michael Sherraden**

**Center for Social Development
Washington University in St. Louis
Campus Box 1196
One Brookings Drive
St. Louis, Missouri 63130 USA
tel 314-935-7433
fax 314-935-8661
e-mail csd@gwbssw.wustl.edu**

January 1998

This paper is supported by grants from The Ford Foundation and The Joyce Foundation. The authors wish to thank Edward Scanlon for his contributions to the section comparing the effects of land holding with the effects of home ownership.

Landholding and Household Development: What Do We Know?

We have learned from assessments of prior research that asset holding has multiple positive effects for households (Page-Adams and Sherraden, 1997). As suggested by Sherraden (1991), these effects occur *in addition* to the potential of assets to increase future consumption. For example, looking at large-sample longitudinal data sets, there is evidence that asset holding is related to a wide range of behaviors and attitudes that are generally considered to be positive for well-being and household development (e.g., Yadama and Sherraden, 1996; Green and White, 1997). This knowledge may have important implications for domestic policy.

Continuing this body of work, this overview of research on effects of land ownership focuses on the economic, personal, and social effects of land ownership of small-scale farmers, often in developing nations, under the assumption that the household is the primary unit of production. A search for relevant studies from different fields of inquiry -- economic development, rural sociology, family studies, anthropology, social work, medicine, and others -- finds 39 empirical studies addressing the effects of land ownership. Sorting these studies into categories for discussion, we present the existing research on effects of land ownership on (1) level of consumption, (2) economic security, (3) investment, (4) women's status, (5) children's status and intergenerational relationships, (6) health, and (7) economic development.

Land Ownership and Level of Consumption (Table 1)

Most studies in this area provide evidence of a positive relationship between small land ownership and farmers' level of consumption. One study suggests the small land

ownership can increase per capita consumption of farmers, and expand the expenditure on such items as housing and daily articles in rural China (Aslanbeigui & Summerfield, 1989). In rural Bangladesh, the weekly expenditures of landholding farmers are twice as much as those who are landless or near-landless (Sharif, 1991). Without land, many poor rural households are unable to meet a minimum level of requirements for consumption (Luerssen, 1994). Other research suggests that the positive benefits of the “green revolution” on living standards of peasants are limited by the constraints of small land ownership, sometimes resulting in living conditions no better or even worse than before the reform (Gough, 1978).

Land Ownership and Economic Security (Table 2)

Research on the relationship between land ownership and economic security suggests positive outcomes for landowners. Some studies show that economic assets, mainly land, can assure security in old age in rural India (Vlassoff, 1980), although findings on whether land can substitute for children as a security asset for old people in rural areas are not consistent from study to study (Thomas, 1991). Looking at reliance on government assistance, one study finds that land owners in the United States receive much less Supplemental Security Income (a means-tested transfer or “welfare”), and land ownership is positively associated with residential stability (Groger, 1983). Also, land ownership can increase the bargaining power of cultivators for negotiating compensation for their labor (Saeed, 1982). Mean wage rates are higher for landholding workers than landless or near-landless workers in rural Bangladesh, and this holds true both for males and females. The main reason is that landless farmers *must* depend on wage-income for a living, while landowners have an alternative means of livelihood (Sharif, 1991). In

addition, land ownership can affect farmers' psychological state and give them "independence, security, dignity, and perhaps even power," thus increasing their involvement in community activities and leadership (Brown & Larson, 1979).

Land Ownership and Investment (Table 3)

This group of studies cumulatively suggest positive effects of land ownership on incentive and capacity to invest. More specifically, they suggest that land holding affects technical innovations in agriculture (Ireson, 1987), and farmers' decisions to adopt new technologies depends mainly on the quality of their land (Mukhopadhyay, 1994). Land ownership can also significantly affect farmers' capacity to invest in agriculture because secure land ownership can be used as collateral for credit, especially long-term credit. These studies indicate that the farmers with insecure or limited land ownership are severely limited in their access to medium- and long-term credit, and thus invest significantly less than titled farmers (Feder, Onchan & Chalamwong, 1988; Feder & Onchan, 1987; Brown & Larson, 1979). In addition, land ownership can help farmers develop other forms of capital. For example, farmers who generate income in non-agricultural work through self-employment are usually those who have land as an asset base (Islam, 1986).

Land Ownership and Women's Status (Table 4)

Land ownership and fertility. This group of studies suggest that land ownership may have an impact on fertility and family size (Cochrane, Khan & Osheha, 1990), but conclusions concerning this relationship are not consistent from study to study. There are two competing hypotheses about the relationship between land ownership and fertility. One is the "labor-demand hypothesis," which proposes that the greater the size of land holding, the more valuable children's labor will be, thus increasing the level of fertility.

The other is the “land security hypothesis,” which holds that land is substituted for children as a security asset, thus land ownership is associated with reduced fertility.

Overall, research tends to support the first hypothesis, suggesting a positive relationship between land ownership and fertility (Maglad, 1994; Mukhopadhyay, 1994).

Land ownership and economic participation. Land ownership can positively affect women’s access to other resources or other forms of economic participation (Henn, 1983; Sachs, 1996). It can also motivate and enable rural women to adopt improved agricultural technologies and hence increase overall production (Agarwal, 1994). However, evidence is very mixed on the relationship between land ownership and women’s participation in wage labor. Some studies suggest that land ownership can reduce women’s wage labor in off-farm agricultural work (Mukhopadhyay, 1994), while others find the opposite (Summerfield, 1994), and still others find that the two are unrelated (Safari, 1991; Sharif, 1991).

Land ownership and intra-household relations. Looking at intra-household relations, land ownership is an important determinant in women’s decision-making in farm management and land transfer, in both family and community contexts (Salamon & Kein, 1979). Land ownership can increase women’s bargaining power within the household, and control of land can increase women’s power to manage household income (Henn, 1983). For widows and the elderly, ownership of land can strengthen support from relatives (Caldwell, Reddy & Caldwell, 1988; Sharma and Dak, 1987). In addition, women’s land rights are associated with reduced drunkenness of spouses and reduced domestic violence (Manimala, 1983). Altogether, rural women’s independent rights to land are positively related to their general welfare, efficiency, equality, and empowerment (Agarwal, 1994).

Land Ownership and Children's Status (Table 5)

Land ownership and health. Some studies indicate that land ownership is associated with reduced child mortality (Kutty et al, 1993; Maglad, 1994), while others suggest that it has little bearing on child mortality (De Meer, Bergman & Kusner, 1993). Land ownership is generally found to be positively related to child's health; for example, it can decrease the probability of children's blindness (Cohen et al., 1985). Research has found that children of landowners have less malnutrition and smaller risk of death (Victoria & Vaughan, 1985). Besides these direct effects, land ownership may also have indirect effects on children's health. For example, due to shortages of land, millions of farmers have moved to urban slums and shanty towns, where their children often live in deleterious public health conditions with little chance to receive health services (Wang'ombe, 1995).

Land ownership and schooling. Virtually all studies in this group suggest that land ownership has negative effects on children's schooling, and is associated with increased child labor, especially for girls (Chernichovsky, 1985; Davis, 1990; Li, 1989; Nagi, 1972). The main reason is that landholding increases the household's demand for child labor, and raises the opportunity costs of schooling. In other words, parents make a short-term decision to use the labor of their children, at the expense of long-term economic gains through education of their children.

Land ownership and intergenerational relations. Land ownership can influence intergenerational relations. Most notably, interhousehold transfers when parents are elderly are quite different for landowners versus landless farmers. For land owners, intergenerational transfers flow from parents to children, but for landless farmers, transfers

flow in the opposite direction, from children to parents (Groger, 1983). Also, in facilitating intergenerational support, it is easier for landowners to set up family compounds and have close kin living nearby.

Land Ownership and Health (Table 6)

The positive relationship between land ownership and children's health status is mentioned above, and this relationship also holds true for adults in rural areas as well. One study in the Peruvian highlands finds that many landless households are unable to meet a minimum level of production and consumption, leading to a deterioration in household health (Luerssen, 1994). Another study in rural Bangladesh suggests that a higher rate of landless rural households is associated with both deficient caloric intake and lower doctor-to-population-ratio (Islam, 1983). Turning to psycho-social impacts on health, one study finds that new land owners tend to manifest a change in their views on health care, going from an unquestioning approach to health problems and health care to a stronger engagement with problems of health and expressions of control over these problems. In turn, this led to changes in the medical system in rural areas (Gordon, 1994).

Land Ownership and Economic Development (Table 7)

Economists almost unanimously agree that the problem of uncertain land tenure in rural areas is one of the biggest barriers to a nation's economic development. Studies of this group indicate that secure land ownership can enhance rural economic development, because it increases productivity significantly (Feder, 1987). Also, land ownership can reduce the migration of peasants to cities and in turn can generate a higher demand for nonfarm goods that are produced locally, thus creating more rural jobs (Islam, 1986).

However, some studies that suggest a negative relationship between small-scale

land ownership and agricultural development. For example, small land holdings often limit the use of machinery (Nagi, 1972). In fact, some researchers find that small land ownership is an obstacle to efficient capitalism and greater economic growth (Montiel, 1979). In addition, small-scale land ownership may have negative effects on resource management – a common example is soil erosion — which is detrimental to long-term economic development (Williams, 1996).

A Comparison of Effects of Land Holding and Effects of Home Owning

In this section we briefly compare the existing knowledge base on the effects of landholding in developing nations with knowledge of the effects of home ownership on urban households in the United States. These two bodies of research are conceptually related, but seldom compared. Our purpose is to summarize the extent to which the existing knowledge in these two areas is distinctive and/or mutually reinforcing. As a basis for knowledge of the effects of home ownership, we rely on Scanlon (1996).

Land ownership and home ownership are, in the most fundamental sense, two types of asset holdings. Broadly speaking, home ownership can be considered a part of land ownership, especially regarding owner-occupied dwellings in rural areas. However, current studies on landholding in rural areas generally focus on arable land, a productive asset (i.e., it generates economic returns), while home ownership is not typically viewed as a productive asset. Empirical evidence suggests that both landholding and home ownership tend to have positive effects, although in both cases, the relationships have not been well specified; studies have focused on specific outcomes rather than more precise theory development.

In terms of types of effects and their implications, the two bodies of research are

somewhat different (of course, effects of the two types of assets may be somewhat different as well). Studies of effects of landholding, as summarized above, concentrate on level of consumption, economic security, investment, women's and children's status, health status, and economic development. Research on home ownership often includes personal well-being (e.g., personal efficacy and sense of control), and social status and roles (e.g., life chances of children and community participation).

Compared with studies of landholding, studies of home ownership have two distinctive characteristics. First, effects of landholding focus almost exclusively on objective outcomes, but studies of home ownership include more psychological outcomes. Second, studies of home ownership have paid more attention to the relationship between home owning and community development (e.g., social stability and civic participation).

Looking at intra-household relations, both types of studies have found strong effects on the status of children, but home ownership research has paid little attention to women's status. Research also suggests that home owning may have less positive influences for some low-income families, due in part to negative neighborhood conditions, but this class-related issue is explored raised in landholding research.

Research Implications

Effects of land ownership on rural households should be examined further. Especially, the relationship between landholding and intergenerational well-being requires a more attention. The consistent empirical relationship between landholding and low educational attainment of children (due to parental use of children's labor to work the land) cries out for innovation and study. Creative programs and applied research are needed to explore what development policies would make schooling more likely for children of

landowners. The possible effects of land ownership on children's psychological outlook and their future social and economic development should also be addressed more thoroughly.

Turning to gender issues, the influence of land ownership on women, which has received some little attention, should be a stronger focus of research. A wide range of effects of land ownership are likely to hold true for rural women as well as men, but more empirical information is needed. One key question is how mothers' land rights might affect children's health. Evidence suggests that children's nutritional status tends to be much more positively linked to the mother's earnings than to the father's (Kumar, 1978), and a similar pattern may exist for gender differences in asset holding in the form of land.

Regarding class issues, research is needed on the quality and location of land, and whether this is related, positively or negatively, to various effects of landholding. Based on home ownership research, there is reason to believe that not all landholding is beneficial, and if so, these circumstances should be identified and analyzed. Along these lines, effects of landholding on household development should be studied within the context of larger social and economic conditions. Landholding may not lead to development of households under conditions of systematic class inequality or active racial or religious discrimination.

Conversely, research can help to clarify the relationship between land ownership at the household level and economic development at the macro level. More work is needed to detail the relationship between land rights and productivity, and land ownership and resources management. More locally, the relationship between land ownership and community participation and development is relatively unexplored.

Policy Implications

The overall picture that emerges from these 39 studies is that landholding has multiple and generally positive impacts on rural households. Therefore, a development policy for alleviating rural poverty should incorporate instruments to encourage, facilitate, subsidize, and safeguard the transfer of land ownership to its cultivators (Saeed, 1982).

However, because of the consistent finding that small land ownership may increase child labor and decrease schooling in developing countries, land policies -- including land reform, distribution, and subsidization -- should seek to eliminate or at least to minimize these negative effects of landholding on educational attainment of children. For long-term economic and social development, this is a major challenges of landholding policy.

Turning to gender issues, another important policy implication is that independent land ownership on the part of rural women should in many circumstances be encouraged, because women's ownership is a critical entry point for increasing their welfare, equality, and empowerment. Rural women are often without economic or political voice, and land policies that seek explicitly to increase women's ownership may be a step toward gender equality and democratization in rural areas.

References

- Agarwal, B. (1994). Gender and command over property: a critical gap in economic analysis and policy in south Asia. *World Development*, 22(10), 1455-1478.
- Aslanbeigui, N. & Summerfield, G. (1989). Impact of responsibility system on women in rural China: An application of Sen's theory of entitlements. *World Development*, 17(3), 343-350.
- Brown, M.M. & Larson, O.F. (1979). Successful black farmers: factors in their achievement. *Rural Sociology*, 44(1), 153-175.
- Caldwell, J.C., Reddy, P.H., & Caldwell, P. (1988). *The causes of demographic change: Experimental research in south India*. Madison, WI: The University of Wisconsin Press.

- Chernichovsky, D. (1985). Socioeconomic and demographic aspects of school enrollment and attendance in rural Botswana. *Economic Development and Cultural Change*, 33(2), 319-322.
- Cochrane, S.H. et al. (1990). Education, income, and desire fertility in Egypt: A revised perspective. *Economic Development and Cultural Change*, 38(2), 313-339.
- Cohen, N. et al (1985). Landholding, wealth and risk of blinding malnutrition in rural Bangladesh households. *Social Science and Medicine*, 21(11), 1269-1272.
- Davis, D. (1990). Chinese social welfare: Policies and outcomes. *China Quarterly*, 119, 577-598.
- De Meer, K., Bergman, R. & Kusner, J.S. (1993). Socio-cultural determinants in southern Peru: including some methodological considerations. *Social Science and Medicine*, 36(3), 317-331.
- Feder, G. (1987). Land ownership security and farm productivity: evidence from Thailand. *Journal of Development*, 24, 16-30.
- Feder, G., & Onchan, T. (1987). Land ownership security and farm investment in Thailand. *American Journal of Agricultural Economics*, 69, 311-320.
- Feder, G., Onchan, T., & Chalamwong, Y. (1988). Land policies and farm performance in Thailand forest reserve areas. *Economic Development and Cultural Change*, 36(3), 483-501.
- Gordon, A. (1994). Agrarian transformation and health care in the Dominican Republic. *Human Organization*, 53, 352-7.
- Gough, K. (1978). The green revolution in South India and North Vietnam. *Monthly Review*, 1978, 29(8), Jan, 10-21.
- Green, R.K. & White, M.J. (1997). Measuring the benefits of home owning: Effects on children. *Journal of Urban Economics*, 41, 441-461.
- Grigsby, W.J. (1996). Women, descent, and tenure succession among the Bambara of West Africa: A changing landscape. *Human Organization*, 55(1), 93-98.
- Groger, B.L. (1983). Growing old with or without it: the meaning of land in a southern rural community. *Research on Aging*, 5(4), 511-526.
- Henn, J.K. (1983). Feeding the cities and feeding the peasants: What role for Africa's women farmers? *World Development*, 11(12), 1043-1055.
- Ireson, W.R. (1987). Landholding, agricultural modernization, and income concentration:

- A Mexican example. *Economic Development and Cultural Change*, 35(2), 351-366.
- Islam, K. & Bachman, S. (1983). PHC in Bangladesh--Too much to ask? *Social Science and Medicine*, 17(19), 1463-1466.
- Islam, R. (1986). Non-farm employment in rural Asia: issues and evidence. In R.T. Shand (Ed.), *Off-farm employment in the development of rural Asia*. Canberra: Australian National University.
- Kumar, S.K. (1978). *Role of the household economy in child nutrition at low incomes*. Occasional Paper No. 95 (Ithaca: Dept. of Agricultural Economics, Cornell University).
- Kutty, V.R. et al (1993). How socioeconomic status affects birth and death rates in rural Kerala, India: Results of a health study. *International Journal of Health Services*, 23(2), 373-386.
- Luerssen, J.S. (1994). Landlessness, health, and the failure of reform in the Peruvian highlands. *Human Organization*, 53, 380-7.
- Maglad, N.E. (1994). Fertility in rural Sudan: the effect of landholding and child mortality. *Economic Development and Cultural Change*, 42(4), 761-772.
- Manimala (1983). Women's participation in the Bodhgaya land struggles. *Manushi*, 14, 2-16.
- Mukhopadhyay, S.K. (1994). Adapting household behavior to agricultural technology in west Bengal, India: Wage labor, fertility, and child schooling. *Economic Development and Cultural Change*, 43(1), 91-115.
- Montiel, E. (1979). A Peruvian pioneer of social Analysis: Jose Carlos Mariategui (1895-1930). *International Social Science Journal*, 31(1), 175-181.
- Nagi, M.H. (1972). Child labor in rural Egypt. *Rural Sociology*, 37(4), 623-627.
- Page-Adams, D. & Sherraden, M. (1997). Asset building as a community revitalization strategy. *Social Work*, 42(5), 423-434.
- Sachs, C.E. (1996). *Gendered fields: Rural women, agriculture, and environment*. Westview Press.
- Saeed, K. (1982). Public policy and rural poverty: A system dynamics analysis of a social change effect in Pakistan. *Technological Forecasting and Social Change*, 21(4), 325-349.
- Safai, M.M. (1991). A redefinition of women's contribution to agricultural production in Amlash, Iran. *International Journal of Sociology of the Family*, 21(1), 17-37.

- Salamon, S., & Kein, A.M. (1979). Land ownership and women's power. *Journal of Marriage and the Family*, 41, 109-111.
- Scanlon, E. (1996). Homeownership and its impacts: Implications for housing policy for low-income families. Working paper 96-2, Center for Social Development, Washington University in St. Louis (a revised version is forthcoming in *Journal of Community Practice*).
- Sharif, M. (1991). Landholdings, living standard, and labor supply functions: Evidence from a poor agrarian economy. *Journal of Development Studies*, 27, 256-76.
- Sharma, M.L. & Dak, T.M. (1987). *Aging in India: Challenge for the society*. New Delhi: Ajanta Publishers.
- Sherraden, M. (1991). *Assets and the poor: A new American welfare policy*. Armonk, NY: M.E. Sharpe.
- Summerfield, G. (1994). Economic reform and the employment of Chinese women. *Journal of Economic Issues*, 48(3), 715-732.
- Thomas, N. (1991). Land, fertility, and the population establishment. *Population Studies*, 45(3), 379-397.
- Victoria, C.G. & Vaughan, J.P. (1985). Land tenure and child health in southern Brazil: The relationship between agricultural production, malnutrition and child mortality. *International Journal of Health Services*, 15(2), 253-274.
- Vlassoff, M. & Vlassoff, C. (1980). Old age security and the utility of children in rural India. *Population Studies*, 34(3), 487-499.
- Wang'ombe, J.K. (1995). Public health crises of cities in developing countries. *Social Science and Medicine*, 41(6), 857-862.
- Williams, D. M. (1996). Grassland enclosures: Catalyst of land degradation in Inner Mongolia. *Human Organization*, 55(3), 307-313.
- Yadama, G. & Sherraden, M. (1996). Effects of assets on attitudes and behaviors, *Social Work Research*, 20, 3-11.

Table 1. Effects of Land Ownership: Studies Addressing Level of Consumption

Study	Purpose	Sample/Data	Findings
Aslandbeigui & Summerfield (1989)	To examine the impact of the “responsibility system” in rural China.	Statistical Year Book of China.	The Chinese rural household has experienced a 5.6% average annual increase in per capita consumption over the 1978-85 period (including increased ownership of durable consumer goods).
Gough (1978)	To explore the effects of the Green Revolution in South India and North Vietnam during the 1950s and 1960s.	Data from intensive rice growing regions: one on the Kaveri delta of southwest Indian, and the other on the Red River Delta of Northeast Vietnam.	Small land ownership limits the positive effects of reform: at least 75% of the people are no better or somewhat worse off than in 1950, and 35% are living at less than 50% of the subsistence level.
Luressen (1994)	To examine the relationship between agrarian transformation and health in Peru.	Data were drawn from research carried out in 1987 and 1988 in the town of Nunoa.	Many poor landless and near-landless households are unable to achieve a minimum level production and consumption.
Sharif (1991)	To explore the effects of landholding status on labor supply.	Micro-level data from Bangladesh on landholding, landless, and near-landless workers from three villages with different economic standards.	The weekly expenditures of landholding families are twice as much as those in landless families in all three villages. The levels of education for landholding farmers are also significantly higher than those or landless ones.

Table 2. Effects of Land Ownership: Studies Addressing Economic Security

Study	Purpose	Sample/Data	Findings
Brown & Larson (1979)	To identify individual and institutional factors that affect black farmers' success over time.	Case studies of successful black farmers (N=13) in 10 communities.	Land ownership confers independence, security, dignity, and power.
Groger (1983)	To examine differential land ownership and its consequences.	Farm records, land transactions, observation, and interviews with 38 white and 35 black adults aged 59-92 in a rural NC county.	Land owners receive much less Supplemental Security Income (SSI); and land ownership can help achieve home ownership and residential stability.
Saeed (1982)	To explain why public policies that were expected to alleviate rural poverty in Pakistan have not worked.	Macro-data on working households in rural Pakistan.	Absence of land ownership is a key factor in rural poverty. Land ownership can increase the bargaining power of cultivators in negotiating compensation for their labor.
Sharif(1991)	To explain the effects of landholding on labor supply.	Micro-data from three villages in Bangladesh on landholding, landless, and near-landless farmers.	Mean wage rates are higher for landholding workers than landless or near-landless workers, for both males and females.
Thamos (1991)	To examine the relationship between land tenure/distribution and fertility.	1952-1978 survey data from Nepal, India, Philippines, Bangladesh, Thailand, Egypt, Iran, Mexico, and Brazil.	Land can be substituted for children as a security asset.
Vlassoff, & Vlassoff (1980)	To examine whether old age is a possible motivation for high fertility.	Study of 371 households in a village in India, on economic value of children and the security of older men.	Economic assets, mainly land, can assure security in old age, rather than an abundance of sons.

Table 3. Effects of Land Ownership: Studies Addressing Investment

Study	Purpose	Sample/ Data	Findings
Brown & Larson (1979)	To identify individual and institutional factors affecting black farmers' success over time.	Case studies of successful black farmers (N=13) in 10 communities.	Land ownership is a key factor because it can be used as collateral for credit.
Feder & Onchan(1987)	To discuss the impact of land ownership security on farm investment and land improvements.	Data from 3 provinces in Thailand.	Ownership security induces significantly higher capital/land ratios; land improvements are significantly affected by land ownership.
Feder, Onchan & Chalamwong (1988)	To examine the economic effects of squatters with limited land rights—STK certificates.	Interviews conducted with a sample of squatters (N=230) with and without STK certificates from forest reserve areas in Thailand.	Capital formation by squatters with STK doesn't differ significantly from that of other squatters, but both groups invest significantly less than do titled farmers.
Ireson (1987)	To determine the factors that influence changes in concentration of farm income in Mexico.	Based on data from agricultural censuses of 1950 to 1970, looking at farmers in 299 municipal areas.	Landholding pattern is an important variable affecting the distributional consequences of technical change in agriculture.
Islam (1986)	To examine non-farm employment in rural Asia.		Farmers who do well in rural non-farm sectors through self-employment are usually those who have land as an assets base.
Mukhopadhyay (1994).	To examine the determinants of technological adoption, agricultural labor supply, fertility, and child schooling.	Survey data obtained from a stratified random sample of 1,930 farm households in West Bengal, India.	Farmers' decisions to adopt new technology depend mainly on the quality of their land; and land ownership can reduce wage labor participation in off-farm agricultural work.

Table 4. Effects of Land Ownership: Studies Addressing Women's Status

Study	Purpose	Sample/Data resources	Findings
Agarwal (1994)	To examine the links between gender inequalities and women's land rights in South Asia.	Women's land rights India, Pakistan, Sri Lanka, Nepal, and Bangladesh, using colonial records, legal documents, village studies, and the author's fieldwork.	Women's independent land rights are positively related to rural women's welfare, efficiency, equality and empowerment.
Caldwell, Reddy & Caldwell (1988)	To examine the causes of demographic change in rural India.	Data from experimental research in south Indian.	For widows and the elderly, ownership of land can strengthen the support they receive from relatives.
Cochrane, Khan & Osheha (1990)	To examine fertility in Egypt.	Interview data from 8,788 married women under age 50 via Egyptian Fertility Survey; and subsequent interviews with 2,532 of their husbands.	Land ownership is the most significant variable in determining family size.
Grigsby (1996)	To examine African women's status under the gender-biased land system.	Anthropological study of social structure of the Bambara of Mali.	Due to very limited security in land rights, women are greatly dependent on their husbands.
Henn (1983)	To examine the problems of women farmers in Africa.	Data from field research on extensive farming system of the Beti of the Southern Cameroon, and the intensive farming practices of the Haya of the Northwestern Tanzanian.	Because women cannot control the use of land or the income from export crop production, they are effectively cut off from the more lucrative forms of rural economic activities.
Maglad (1994)	To examine the impact of child mortality and access to land on fertility.	A survey of 523 households in 26 villages in the Elsuki scheme in rural Sudan.	A 50% increase in amount of land owned was projected to raise the mean number of surviving children from 5.62 to 6.08. A 50% decrease in child mortality was projected to raise the mean number of surviving children from 5.62 to 5.82.
Manimala (1983)	To examine women's participation in the Badhgaya (eastern Indian) land struggles.	Historical research using documents of the Bodhgaya land struggle movement in the late 1970s.	Where only men have land titles there is an increase in drunkenness, wife-beating and threats.
Mukhopadhyay (1994)	To examine the determinants of technological adoption, agricultural labor supply, fertility, and child schooling.	Survey data from a sample of 1,930 farm households in West Bengal, India.	Land ownership and technology have positive effects on fertility; and land ownership can reduce women's wage labor participation in off-farm agricultural work.
Sachs (1996)	To examine how the changing global economy affects rural women, focusing on land ownership, cropping system, etc.	Historical and contemporary research, rural women's writings, and in-depth interviews in different developing countries.	Women's exclusion from land ownership limits their access to credit, capital, and other resources.
Safari (1991)	To examine women's contribution to agricultural production in Amlash, Iran,	Structured interview data from 96 village women.	No significant relationship was found between women's participation in agricultural activities and land tenure.

Salamon & Kein (1979)	To examine the relationship between land ownership and women's power.	Interviews with and participant observation of 22 households of German extraction in a community of Central Illinois farm families.	Land ownership is a very important determinant in women's decision-making on farm-management and land transfer, at both family and community levels.
Sharif (1991)	To explain the effects of landholding status on labor supply.	Study of landholding, landless, and near-landless farmers in three Bangladesh villages.	No clear pattern on the relationship between landholding status and women's labor supply.
Summerfield (1994)	To examine the relationship between the " responsibility system " in China and rural women's employment status.	Chinese Statistical Yearbook.	The absence of independent land rights of rural women has resulted in increased employment of women in agricultural activities.

Table 5. Effects of land Ownership: Studies Addressing Children’s Status and Intergenerational Relations

Study	Purpose	Sample/Data	Findings
Chernichovsky (1985)	To examine the factors that affect children’s school enrollment and attendance in Botswana.	Botswana Rural Income Distribution Survey of 1974 (N=6,475).	Holdings of stock and land increase the household’s demand for child labor and the opportunity cost of schooling, thus decreasing children’s school enrollment.
Cohen et al. (1985)	To determine the prevalence and determinants of children blinding malnutrition in rural Bangladesh.	Study of 11,618 rural households and 18,660 preschool age children.	Almost 80% of blind children come from landless households. Poorer households with access to less than 0.3 acres of land are at least twice as likely as others to have blind children.
Davis (1990)	To examine the outcomes of Chinese rural economic reform.	Interview data from north Chinese villages.	Many rural families pull their girls out of school after the introduction of the "responsibility system."
De Mer et al. (1993)	To determine social and cultural factors of child mortality in rural Peru.	Retrospective survey data: child mortality rates in two Aymara and three Quechua communities (N=86 families).	The amount of land owned has little bearing on child mortality.
Groger (1983)	To compare the circumstances of old rural people with and without land.	Study of 38 white and 35 black adults, aged 59-92 in a rural NC county.	Inter-household transfers flow from parents to children for landowners, and from children to parents for the landless. Close kin live nearby for landowners.
Kutty et al (1993)	To explore how socioeconomic status affects birth and death rates in rural India.	Health survey data from Kerala, using samples of 9,940 households and 57,665 persons.	Land ownership has an influence on birth and death rates, independent of the population, religion, and region.
Maglad (1994)	To examine the impact of child mortality and access to land on fertility.	A survey of 523 households in 26 villages in the Elsuki scheme, rural Sudan.	A 50% increase in amount of land owned was projected to raise the mean number of surviving children from 5.52 to 6.08.
Li (1993)	To examine the relationship between the “responsibility system” and Chinese families.	Data from State Statistical Bureau (China), and All-China Women’s Federation.	The absolute number of students attending secondary school in Chinese rural areas has declined from 48.21 million students in 1978 to 27.74 million in 1989, while many new enterprises employed child laborers (most of them girls).
Nagi (1972)	To analyze the determinants, trends, and differentials in child labor in rural Egypt.	Study using macro-data.	Land ownership of small farmers increases the use of child labor.

Victoria & Vaughan (1985)	To examine the relationships among infant mortality, malnutrition, and land tenure patterns in Brazil.	Demographic and agricultural censuses, vital statistics, dietary information, and a large survey of both urban and rural areas.	Children of landowners show least malnutrition and a reduced risk of death.
Wang'ombe (1995)	To examine the quality of health care in urban areas in sub-Saharan Africa.	Documentary evidence.	Due to the shortage of land, millions of rural people have moved to the urban areas, and their children are in very poor health condition.

Table 6. Effects of Land Ownership: Studies Addressing Health

Study	Purpose	Sample/Data	Findings
Gordon (1994)	To examine the relationship between agrarian transformations and health in the Dominican Republic	Data from field research carried out in 1980 and 1983 on a cooperative rice farm in the province of Valverde.	The peasants' new status as land owners heralded a change in their views on health care: from a simple search for protection to an expression of control over health problems.
Islam (1983)	To assess the goal of health for all the Bangladesh by reviewing education, health, income, and land distribution.	Official data sources.	Half of the rural households own less than 0.5% of the agricultural land, contributing to deficient caloric intake and low doctor to population ratio.
Luerssen (1994)	To examine the relationship between agrarian transformation and health.	Data from research carried out in 1987 and 1988 in the town of Nunoa, Peruvian highlands.	Limited access to land leads to a deterioration in the health condition of landless and near-landless households.

Table 7. Effects of Land Ownership: Studies Addressing Economic Development

Study	Purpose	Sample/Data	Findings
Feder (1987)	To discuss the impact of land ownership security on farmers' input and output values.	Data from three provinces in Thailand.	Provision of secure and legal ownership to untitled farmers can significantly increase productivity.
Islam (1986)	To examine non-farm employment in rural Asia.		Land ownership can reduce the migration of peasants to cities, and in turn can generate more rural jobs.
Montiel (1978)	To examine the role of land ownership and education in Peruvian society.	Social analysis of Peruvian society.	Small farm land ownership is a major obstacle to Peru's capitalist development.
Nagi (1972)	To analyze the determinants, trends, and differentials in child labor in rural Egypt.	Study using macro-data.	Land ownership of small farmers can put economic limits on the use of farm machinery.
Williams (1996)	To analyze the consequences of household grassland enclosures in Inner Mongolia, China.	Annual village registries, participant observation, and interviews (N unspecified).	Household enclosures of land can have negative effects on resources management, such as soil erosion.