

Women's Land Rights and Child Well-Being in Vietnam

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Abstract: Vietnam's 1993 Land Law created a land market by granting households land-use rights which could be exchanged, leased, and mortgaged. Using a matched household sample from Vietnam's 2004 and 2008 Household Living Standards Survey, this study analyzes whether increased land titling for women led to improvements in child health and education. Results indicate that female-only held land-use rights decreased the incidence of illness among children, increased their health insurance coverage, raised school enrollment, and reallocated household expenditures toward food and away from alcohol and tobacco. These effects were almost all stronger than those of male-only held land-use rights.

Keywords: Land-use rights, property rights, child health, education, women, Vietnam

JEL Codes: Q15, O12, J16

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I. Introduction

Improving women's control over assets such as land can improve women's economic security, which in turn may have powerful consequences for the health and well-being of their children. The availability of collateral facilitates borrowing, which, among other things, gives women the financial means to invest in entrepreneurial activities and to increase household expenditures. In addition to facilitating greater access to credit, land rights can also affect women's agricultural productivity and earnings power through increased security of land tenure. Increased income in the hands of women has well-documented effects on health and schooling outcomes of children through changes in intra-household resource allocation, and a growing body of work has substantiated the relationship between women's control over financial resources and improved human-capital outcomes for their children.

In practice, greater control over land in developing countries has come primarily through land titling programs. In the case of Vietnam, the 1993 Land Law prompted one of the largest land-titling programs seen to date in the developing world both in terms of scope and pace of implementation; within seven years, rural households were issued about 11 million land-use certificates (Do and Iyer 2008). The large-scale reform has made Vietnam the subject of a number of studies examining the effect of land reform on agricultural productivity and household decision-making. Notable findings include an increase in the proportion of cultivated areas planted with more profitable crops, increased labor supply in non-farm activities, and greater food security (Do and Iyer 2008, Markussen *et al.* 2011).

A topic which has not been examined as yet is whether Vietnam's land reforms led to overall improvements in child well-being, and whether such effects were especially evident in households in which women held land rights. By creating the basis for a new formal market in

land, the 1993 Land Law increased the security of land tenure with potentially large consequences for household decisions regarding agricultural investments, labor inputs, and time-use. These decisions, in turn, may have implications for human-capital outcomes of children within the home. Our study explores this topic by examining whether land-use rights registered in the names of women alone or jointly portray differential patterns on measures of child well-being compared with land-use rights registered in the name of men only.

Although published evidence has shown that resources concentrated in the hands of women result in positive benefits to children, there is little previous work that can directly trace the effects of granting land rights to women. To the best of our knowledge, Allendorf (2007) is the only exception. Using data on matched households from the 2004 and 2008 Vietnam Household Living Standards Surveys (VHLSS) – in which land-use rights are associated with specific stake-holders within the home – we are able to directly ascertain the gender-differentiated impact of the titling program on child health and education. The methods and data in our study contrast with those of other studies in that we can identify who has *de facto* control over a household’s land holdings, and hence to whom to attribute the causal impacts of that control. Our results demonstrate that increased land titling for Vietnamese women generates substantial health and educational benefits for their children.

II. Background and Conceptual Framework

As part of its sweeping “Doi Moi” policy reforms, Vietnam’s government began the move away from a collective agricultural system toward a new structure that allowed farm households to lease plots of land for ten to fifteen years. The new system was intended to improve incentives for farmers to invest in their land. However, in practice, the land-use rights were not viewed as being secure as they were not tradable and consequently, many farmers were

reluctant to make long-term investments in their fields. To improve the incentive structure facing farm households, the government passed a new Land Law in 1993 that extended the lease period and allowed farmers to trade, transfer, rent, bequeath and mortgage their land-use rights. The law change was implemented through the issuance to farm households of land-use rights — known in Vietnam as Land-Use Certificates (LUCs). Although the issuance of LUCs proceeded quickly, implementation across the provinces remained uneven. Problems included delays on the part of the management agencies in setting guidelines for issuing LUCs, land-use tax rates that were initially too high, inaccurate records on prior landholdings, large numbers of disputes that required resolution and debts that needed to be cleared before LUCs could be issued, and lack of awareness among farm households and local authorities (especially in remote areas) about the importance of formal land-use rights.

Issuance of land-use rights also demonstrated uneven patterns in terms of gender. In principle, the legal reforms did not discriminate in granting rights because legal decrees on implementation of the Land Law relied on gender-neutral language such as “individuals” and “users” in referring to the targeted beneficiaries of the reforms. Rather, gender disparities that favored men in the issuance of land-use rights resulted from implementation. In particular, in the initial years the LUCs had space for only one name that was to be filled by the household head. Since relatively more households were headed by men, the unintended consequence was that few women had their names on the LUCs. This changed with a 2001 government decree that stipulated that the names of both husband and wife should be inscribed on the LUCs if the land was jointly owned. However, the new regulation was not well enforced since the government agency in charge of rural land titling lacked the administrative capacity to ensure full compliance across provinces (Ravallion and van de Walle 2008). Gender inequities in the issuance of land-

use rights were also exacerbated by social norms and cultural traditions in Vietnam that favored men in decisions regarding farm production and the ownership of assets. Finally, discrimination against female household heads in the market for land sales also contributed to gender disparities in the distribution of land-use rights (Deininger and Jin 2008).

In principle, land rights are positively linked to household behavior through four channels. First, land owners are more likely to make long-term investments in their land if they are confident that the state cannot expropriate their holdings. Allowing land to remain fallow for longer periods of time to increase soil fertility, investing in improved drainage and irrigation, and planting perennial crops rather than annual crops, are all examples of relatively costly investments that farmers may be reluctant to undertake in the absence of secure land rights. In addition to improving investment incentives, a low risk of expropriation decreases the need for farmers to spend private resources to protect their land and can divert capital resources toward alternative agricultural investments (Besley 1995).

Second, stronger land rights can make it easier to obtain loans in credit markets as land is the most common form of collateral. Third, securing rights to land may have beneficial welfare impacts by reducing vulnerability when economic shocks occur, or after divorce or widowhood. Finally, when land rights are transferrable, households have the opportunity to generate gains from trade in land sales and rental markets. Households may then use the income to finance expenditures and other investments.

Each of these channels affects women's control over resources as higher yields due to agricultural investments, greater access to credit, and gains from trade in land markets may provide women the capital they require to finance a host of economic activities including self-employment. The income generation that can result from well-defined land rights serves as a

viable means of incentivizing women's shift from low-paid work in marginally productive activities to more remunerative work. Income generation and access to credit can also have feedback effects on women's bargaining power vis-à-vis male members in the household (Agarwal 1994). Women's control over assets can strengthen their negotiating power by improving their fallback position, and studies have shown that additional income controlled by mothers leads to greater household expenditures on inputs into child well-being, including food, education, and health services.

III. Data, Methodology, and Results

The study uses household survey data from the 2004 and 2008 waves of the Vietnam Household Living Standards Surveys. The VHLSS, begun in 2002 and conducted every two years by Vietnam's General Statistics Office, has data on a range of individual and household characteristics including income, ethnicity, region of residence, household structure, hourly wages, education, and income earned from different agricultural activities. The surveys are panel in nature, with a subset of the households surveyed in one wave tracked and re-surveyed in the following wave. The 2004 and 2008 waves contain specialized modules on land use with detailed information on registration of LUCs and the identity of the first and second stakeholders. In both 2004 and 2008, the full samples contain information for 9189 households.

We began by constructing a panel data set of households and their members from 2004 and 2008. The panel allows us to identify departure of old (2004) members, arrival of new (2008) members, and whether there was a switch in holdings of LUCs from male-only to female household members (either held alone or jointly with the husband). The panel also allows us to control for heterogeneity in household preferences and other unobservables. Construction of the panel began with using the 2004-2006 household identifier cross-walks to match households

across these years. Similar to the technique employed in McCaig (2009), we used gender and year of birth of household members between 2006 and 2008; a similar cross-walk was created for households between 2006 and 2008. Matched households between 2004 and 2008 were identified by combining information from the 2004-2006 and 2006-2008 household identifier cross-walks. The final panel dataset at the household level has 1728 matched households containing 14,826 individuals.

A potential challenge in analyzing the effect of LUCs on measures of child well-being is selection bias. More progressive or egalitarian households may be more likely to seek joint land-use rights and have favorable human-capital outcomes for children. To estimate the *causal* impact of LUCs registered in women's names or jointly on child health and schooling, we control for household-level unobservable characteristics related to preferences or tastes that may determine patterns of LUC registration and measures of child well-being simultaneously. The method of choice is a household-fixed effects model with region and time dummies and their interactions. The 2004 to 2008 time window is arguably small enough such that household-level unobservable characteristics may be treated as time-invariant. Region and time dummies and their interactions are included to control for other factors at these levels that may be changing contemporaneously. We also control for province-level characteristics to address province-level heterogeneity in land registration levels.

The model is of the form below:

$$y_{ijt} = a_0 + a_1H_i + a_2R_j + a_3T_t + a_4(R_j \times T_t) + \beta X_{ijt} + \delta LUC_{ijt} + \varepsilon_{ijt} \quad (1)$$

where i denotes a household, j denotes a province, and t denotes time. The notation H_i is the time-invariant household-level unobservable, R_j is the time-invariant regional unobservable, and T_t is a time dummy. Household, commune, and province characteristics in X_{ijt} are identified in

the fixed effects framework of equation (1) since they vary from 2004 to 2008.¹ The coefficient of interest δ represents the impact of land-use certificates on y_{ijt} , which encompasses nine different measures of child health and schooling. The key independent variables are whether a LUC is held solely by a man, solely by a woman, or jointly by husband and wife. The regressions also include a host of household characteristics (indicators of household head's age, gender, schooling, marital status and ethnicity; type of land owned – annual, perennial or residential – and land area), commune-level characteristics (geographical terrain, poverty rates, major religion, access to roads, market, and electrical power), and province-level characteristics (population, number of farms, gross agricultural output and area). Health and education measures are calculated over households in the matched sample with all children between zero and fifteen years of age (9205 observations) and with school-age children between six and fifteen years of age (7256 observations), respectively. Standard errors are clustered at the regional level following Bertrand *et al.* (2004).

Results in Table 1 indicate that female-only held land-use rights decreased the incidence of illnesses among children measured in four ways: the proportion of household children sick in the past four weeks, sick in the past twelve months, sick in the past twelve months and absent from school, and sick in the past twelve months and bedridden. For instance, the first indicator shows that LUCs held by women led to a 19 percentage point drop in the share of household children who were sick in the recent past. The magnitude of this effect is almost three times that of LUCs held by men only. Female-held LUCs are also found to have positive and statistically significant impacts on the remaining three indicators of children's sickness. Table 1 further reports that female-only held LUCs lead to a five percentage point increase in health insurance

¹ See sample means posted on-line at http://people.brandeis.edu/~nmenon/summary_statistics_vietnam_child_health.pdf.

coverage of household children, thus indicating a mechanism to explain the beneficial impacts on the various measures of child health.

In terms of education, estimates in Table 1 show that LUCs held in the name of women generate a 0.04 point increase in the proportion of household children of school age who are enrolled in school. The impact of jointly-held LUCs on this indicator of child well-being appears to be even stronger. The final three indicators are for expenditure shares. When LUCs are held solely by women, there is a 1 percentage point increase in the share of household expenditures allocated to food, and a half of a percentage point decrease in the expenditure share allocated toward alcohol, beer, tobacco, and betel nut. Spending on these adult substances is also found to decrease in the case of jointly-held LUCs. Expenditure shares on education show the expected positive sign for LUCs that are held jointly or by women alone, but the estimates are not measured with precision.

IV. Closing Remarks

The study has provided new evidence on the relationship between land titling and human-capital outcomes for children in Vietnam. Evaluating the economic benefits of women's holdings of land-use rights is particularly important given the heavy weight the government has placed on meeting the needs of vulnerable members of the population, reducing poverty and improving societal well-being. Results indicate that female-only held land-use rights decreased the incidence of children's illnesses, increased their health insurance coverage, raised school enrollment, and reallocated household expenditures away from alcohol and tobacco. But for one exception, these effects were larger in magnitude than those of male-only held land-use rights.

References

- Agarwal, Bina. 1994. *A Field of One's Own: Gender and Land Rights in South Asia*. Cambridge: Cambridge University Press.
- Allendorf, Keera. 2007. "Do Women's Land Rights Promote Empowerment and Child Health in Nepal?" *World Development* 35 (11): 1975-1988.
- Bertrand, Marianne, Esther Duflo, and Sendhil Mullainathan. 2004. "How Much Should We Trust Differences-in-Differences Estimates?" *Quarterly Journal of Economics* 119 (1): 249-275.
- Besley, Timothy. 1995. "Property Rights and Investment Incentives: Theory and Evidence from Ghana," *Journal of Political Economy* 103 (5): 903-937.
- Deininger, Klaus, and Songqing Jin. 2008. "Land Sales and Rental Markets in Transition: Evidence from Rural Vietnam," *Oxford Bulletin of Economics and Statistics* 70 (1): 67–101.
- Do, Quy-Toan, and Lakshmi Iyer. 2008. "Land Titling and Rural Transition in Vietnam," *Economic Development and Cultural Change* 56 (3): 531-579.
- Markussen, Thomas, Finn Tarp, and Katleen Van Den Broeck. 2011. "The Forgotten Property Rights: Evidence on Land Use Rights in Vietnam," *World Development* 39 (5): 839–850.
- McCaig, Brian. 2009. "The Reliability of Matches in the 2002-2004 Vietnam Household Living Standards Survey Panel," Australian National University, Centre for Economic Policy Research Discussion Paper No. 622.
- Ravallion, Martin, and Dominique van de Walle. 2008. *Land in Transition: Reform and Poverty in Rural Vietnam*. New York and Washington, DC: Palgrave MacMillan and World Bank.

Table 1. Effects of Land-Use Certificates on Child Health and Schooling Outcomes in the Household

	<i>Proportion of Children Sick in Past 4 Weeks</i>	<i>Proportion of Children Sick in Past 12 Months</i>	<i>Proportion of Children Sick in Past 12 Months and Absent from School</i>
LUC Held by Male Only	-0.071* (0.039)	-0.034 (0.044)	-0.011 (0.022)
LUC Held by Female Only	-0.189*** (0.044)	-0.090** (0.037)	-0.100* (0.058)
LUC Held Jointly	0.197 (0.123)	-0.051 (0.084)	-0.056 (0.051)
Number of observations	9205	9205	9205
	<i>Proportion of Children Sick in Past 12 Months and Bedridden</i>	<i>Proportion of Children Covered by Health Insurance</i>	<i>Proportion of Children Enrolled in School</i>
LUC Held by Male Only	-0.074* (0.040)	0.017 (0.054)	0.009 (0.021)
LUC Held by Female Only	-0.053* (0.032)	0.045* (0.026)	0.041** (0.021)
LUC Held Jointly	0.071* (0.041)	0.074 (0.067)	0.082** (0.041)
Number of observations	9205	9205	7256
	<i>Proportion of Expenditures on Food & Beverages</i>	<i>Proportion of Expenditures on Alcohol & Tobacco</i>	<i>Proportion of Expenditures on Education</i>
LUC Held by Male Only	0.005 (0.011)	-0.0003 (0.002)	-0.005 (0.005)
LUC Held by Female Only	0.009** (0.005)	-0.005** (0.002)	0.002 (0.005)
LUC Held Jointly	-0.0005 (0.006)	-0.003*** (0.001)	0.006 (0.007)
Number of observations	9205	9205	7256

Notes: Weighted to national level with weights provided by the VHLSS. Standard errors, clustered by region, in parentheses. The notation *** is $p < 0.01$, ** is $p < 0.05$, * is $p < 0.10$. All regressions include a constant term; controls for types of land; controls for household, commune and province characteristics as shown in summary statistics table on-line at <http://people.brandeis.edu/~nmenon/>; region dummies, time dummies, and region-time interactions.