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# The Rental Market for Farmland in Vietnam's Mountainous North Central Coast Region: Outcomes and Constraints

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*Vietnam's rural areas are characterized by small and fragmented farms, cost inefficiency, and low agricultural income. An efficient land rental market is expected to alleviate some of these problems by creating incentives for allocative efficiency. Voluntary rental transactions are also expected to improve the welfare of both lessees and lessors. This study investigates the efficiency and equity outcomes of the rental market for farmland in a commune in Vietnam's north central coast region, a mountainous area with relatively low incomes and a high concentration of ethnic minorities. It also examines the efficiency of the rental market itself, recognizing that market participation is affected by cultural norms and mutual trust. Data for the study were gathered in 2 household surveys, each conducted in 2 villages. The first was a multistage sample survey of 200 households; the second was a census survey of rental market participants. It was found that the rental market is encouraging households to trade their land use rights in mutually beneficial ways that transfer land to more effective farmers. But there is considerable room for improvement through increasing the number of market participants by reducing transaction costs associated with inadequate information, opportunism, and lack of confidence in the legal system. Perceived levels of risk differed between Kinh and Thai respondents.*

***Keywords:*** *Market efficiency; transaction costs; social capital; land use efficiency; equity; Vietnam.*

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## Introduction

The Vietnamese government introduced market-based land reforms to promote the consolidation of farmland and growth of farms, starting with the 1993 Land Law (Vietnamese Government 1993). However, Vietnam's farms remain highly fragmented. For the whole country, there are about 75 million parcels of land, an average of 7 to 8 plots per farm household (Hung et al 2007). One explanation for this slow response is that the rural land market is inefficient (Ravallion and van de Walle 2003; CIEM 2005; Hung et al 2007; Deininger et al 2008). This study focuses on the rental market for farmland, because the current Land Law still imposes stringent limits on the area of land that households may own but allows farmers to lease additional land. Whereas voluntary rental transactions are expected to result in both efficiency and equity gains, sale transactions do not hold the same promise, especially when land is valued for purposes other than agriculture, such as social security (Deininger and Jin 2008).

The purpose of this study is to investigate the performance of the rental market for farmland in Tam Quang commune, which is located in a mountainous district in Vietnam's north central coast region. Consideration is given first to the efficiency and equity outcomes of the rental market, and then to the efficiency of the market itself. The study region is characterized by relatively low incomes and a high concentration of ethnic minorities (JICA 2008). Ethnic diversity is expected to increase transaction costs and so reduce market efficiency (Beghin and Fafchamps 1995). Ethnic groups differ in their cultural norms and levels of social capital, and these differences may also impact transaction costs and market efficiency within communities and locations (Charny 1990; Tsai 2000; Cersosimo and Nistico 2008).

This article is organized as follows: After a review of the literature on the expected benefits of an efficient rental market for farmland, developments in Vietnam's land rental market are outlined. Next, the study site and sampling method are described, and household demographics are compared across the 2 study villages. Observations on the performance of the land rental market and its equity and efficiency outcomes are then presented, followed by evidence of market inefficiency. The article concludes with recommendations for policy and future research.

 

## Expected benefits of an efficient farmland rental market

Land markets comprise both rental and sale markets. Rental markets are widely recognized as having better allocative efficiency and equity outcomes than sale markets and often play a more important role than sale markets in developing countries and transitional economies characterized by tenure insecurity and market imperfection (Deininger and Jin 2008). From an efficiency perspective, the land rental market imposes an opportunity cost on underutilized and idle land. This promotes allocative efficiency, as owners of underutilized or idle land would rather rent out the land than forgo rental income. Consequently, transactions conducted in an efficient land rental market tend to transfer farmland from less effective to more effective farmers, that is, those more willing and able to farm (Crookes and Lyne 2003). Renting can also improve farming efficiency by allowing emerging farmers to consolidate land, thereby reducing losses associated with fragmentation (Hung et al 2007) and benefiting from economies of size in the adoption of new technology (Kille and Lyne 1993; Swinnen et al 2006). In addition, efficient land rental markets help overcome imperfections in markets for credit, insurance, and machinery through interlinked contracts such as crop-sharing arrangements (Otsuka et al 1992).

Voluntary transactions conducted in an efficient rental market are expected to benefit both lessor and lessee. Equity improves as land transfers to households that are short of land for subsistence or commercial farming purposes, while rental income accrues to those who cannot, or prefer not to, farm (Lyne 2009). Moreover, renting does not create a landless class, and where insurance and credit markets are imperfect or missing altogether, it can help farmers avoid permanent loss of land following adverse events such as crop failure.

An efficient land rental market is characterized by low transaction costs and security of land tenure (Nieuwoudt 1990). Transaction cost is defined as "the cost of obtaining information, establishing one's bargaining position, bargaining and arriving at a group decision, and enforcing the decision made" (Randall 1972: 176). Ex ante transaction costs relate to the process of conducting a transaction, including the costs of searching for trading partners and of negotiating and specifying the terms of the contracts. Ex post transaction costs include the costs of monitoring, renegotiating, and enforcing the terms of contract, and the risk of losses associated with a breach of contract. High transaction costs prevent markets from operating efficiently, and they are influenced by both legal infrastructure and social norms (Williamson 1979, 1985, 2000).

The quality of the legal infrastructure has important implications for transaction costs in the land rental market as it influences the enforceability of property rights (Place et al 1994). Lessors will perceive high risk in a rental transaction if they lack confidence in the legal system and its ability to defend their property rights against a claim made by tenants. This risk adds to the lessor's transaction costs and raises the offer price to prospective lessees, particularly those whose trustworthiness is unknown (Lyne and Thomson 1997). A similar problem exists on the lessee's side owing to the threat of eviction, that is, when they perceive that the duration of their contractual use right is not assured (Gordon 1890).

In addition to the quality of the legal system, social capital is considered to be an important factor affecting transaction costs and thus market efficiency (Williamson 1985, 2000; Charny 1990; Putnam 2000). Social capital refers to social networks that can facilitate productive actions between individuals (Coleman 1988; Putnam 2000; Narayan and Cassidy 2001; Adler 2002; Moran 2005). Trust, a central part of social capital, is expected to reduce transaction costs as it reduces the ex ante costs of finding suitable trading partners and the ex post costs associated with noncompliance (Charny 1990; Tsai 2000; Raiser 2008). However, different kinds of trust are expected to have different influences on transaction costs faced by individuals, and therefore different impacts on market efficiency (Putnam 2000).

## Land reform in Vietnam

Under Vietnam's 1993 Land Law, land remained state property but individuals were assigned well-defined long-term rights to use, bequeath, transfer, and mortgage the land. The duration of these rights and ceilings imposed on the amount of land that could be held with these rights by individuals, households, and organizations were defined by the law and varied across different types of land—for example, agricultural, forest, residential, and industrial land (Vietnamese Government 1993). These institutional changes were considered necessary to promote land use efficiency through market-driven land redistribution and consolidation. In terms of redistribution, use rights were expected to transfer voluntarily from less effective to more effective farmers. In terms of consolidation, it was anticipated that farmers would exchange and merge highly fragmented parcels of land into larger, commercially viable farms (Marsh and MacAulay 2001; Do and Iyer 2007; World Bank 2010).

In 2003 the Vietnamese government issued Land Law No.13/2003/QH11 (Vietnamese Government 2003), replacing the 1993 Land Law. Although the new law extended the duration of land rights and relaxed the ceilings on the amount of land that could be held with these more secure rights, a farmer wishing to consolidate land in excess of the defined ceiling can do so only through temporary transfers of use rights. This law clearly


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emphasized the importance of the land rental market relative to the land sale market in Vietnam. The change in land policy reduced unused land from 13 million ha in 1993 to 3 million ha in 2008. While some of these gains have been attributed to the land market (World Bank 2010), several authors have argued that the market for farmland in Vietnam is still far from efficient and that a more efficient land market will help to raise stagnating levels of productivity in agriculture (Ravallion and van de Walle 2003; CIEM 2005; Marsh et al 2006; Hung et al 2007; Deininger et al 2008).

Given the significance of voluntary rental transactions to efforts to improve efficiency and equity outcomes, it is important to understand why the market is still inefficient in Vietnam. There is a dearth of research on the causes of inefficiency in Vietnam's land rental market. This study aimed to provide more information by investigating efficiency and equity outcomes of the market, levels of participation in the market, and factors affecting market participation, and to offer policy insights for promoting sustainable rural livelihoods.

## Study site, data collection, and household demographics

The research was conducted in Tam Quang commune in the Tuong Duong district, a mountainous area in the north central coast region characterized by low incomes and a high incidence of Thai people, one of the largest ethnic minority groups in Vietnam. Tam Quang commune was chosen for study because of its diversity in land types, land uses, income sources, and cultures. This diversity is expected to create variation in household resource endowments and priorities, leading to differences in households' ability to use farmland profitably. Without these differences there would be no demand for voluntary land transactions.

Two household surveys, a sample survey and a census survey, were conducted in Tam Quang commune. The sample survey was designed to generate a representative sample of commune households. Two of the commune's villages (primary-stage units), Son Ha and Bai Xa, were selected with probability proportionate to an estimate of their size, where size was measured by the number of households. A random sample of farm households (secondary-stage units) was then drawn from a list of farm households constructed for each of the 2 sample villages. A constant sampling rate was applied to each sample village, and was sufficiently large to generate a total sample of 200 farm households. This self-weighting sampling process allowed sample statistics to be computed at the commune level without weights to account for differences in village size. Five of the 200 cases were excluded from the sample survey data set owing to incomplete questionnaires.

The census survey followed the sample survey and covered all rental market participants in each village. This survey provided information about lessees and lessors. Data were gathered early in 2012 by the first author and students from Vinh University using a structured questionnaire and personal interviews with household members. Although the data were analyzed quantitatively, many of the variables were qualitative, measuring respondents' perceptions on a Likert-type scale.

Despite the short distance (6 km) between Son Ha and Bai Xa, these villages have significant differences in socioeconomic and geographic features (Table 1). The vast majority of Son Ha's population is Thai; Bai Xa has a much larger share of Kinh people (the dominant ethnic group in Vietnam, accounting for more than 80% of the country's population). The proportion of household members classified as farmers is significantly lower in Bai Xa than in Son Ha. Conversely, Bai Xa households have a much higher proportion of members working in nonfarm enterprises and earn substantially higher off-farm incomes than do Son Ha households. Off-farm incomes are earned in seasonal farm labor and permanent jobs with local authorities and in factories. Although Son Ha households earn higher farm incomes, they are much poorer than their counterparts in Bai Xa. Bai Xa, which has a much lower proportion of Thai households, has a much higher proportion of adults with tertiary education.

Despite their lower proportion of farmers, households in Bai Xa are endowed with much larger areas of lowland, which is flatter and better suited to arable farming than the highland. While mean household endowments of irrigated lowland are similar in both villages, households in Bai Xa average more than 10 times as much nonirrigated lowland than households in Son Ha (Table 2). The most important sources of farm income in both villages are maize and bamboo, which together account for more than 90% of household farm income.

## Equity and efficiency outcomes of the rental market

The census survey data (relating only to rental market participants) support the argument that rental transactions promote land use efficiency by transferring land to more effective farmers. The average value of farm equipment owned by lessees is 50 times higher than that of lessors (Table 3), indicating that land was transferred to households better equipped to farm it. In addition, lessee households have more than twice as many members available for farm labor. Lessees had also attended twice as many agricultural training courses over the previous 12 months. Differences in efficiency are perhaps best demonstrated by differences in income earned per unit of arable land; lessees earned almost 10 times as much per $m^2$ as lessors from annual crops in the 2011/12 season. More than 90% of lessees claimed increases of 150–200%


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**TABLE 1** Characteristics of households in Son Ha and Bai Xa.[a)]

| Village demographics | Son Ha ($n = 115$) | Bai Xa ($n = 80$) | $t$ value |
|---|---|---|---|
| Percentage of Thai households | 96.0 | 63.0 | 5.744** |
| Percentage of Kinh households | 4.0 | 37.0 | 5.744** |
| Household size (number of people) | 4.1 | 4.3 | 1.125 |
| Occupation | | | |
| Percentage of household members who farm | 53.2 | 40.8 | 3.372** |
| Percentage of household members who are self-employed | 5.9 | 14.1 | 2.698** |
| Percentage of household members employed in nonfarm jobs | 12.1 | 27.9 | 4.256** |
| Percentage of household members who receive a pension | 2.4 | 5.1 | 1.564 |
| Income | | | |
| Mean annual off-farm income per household member (USD) | 146.6 | 297.3 | 2.595* |
| Mean annual farm income per household member (USD) | 42.3 | 19.2 | 2.623** |
| Education | | | |
| Percentage of adults with only primary school education | 23.1 | 13.7 | 2.810** |
| Percentage of adults with tertiary education | 6.7 | 14.1 | 2.661** |

[a)]Source of data: Household sample survey conducted by author in 2012.
*Significant at the 5% level of probability.
**Significant at the 1% level of probability.

in yields on land that they leased (relative to yields previously achieved by their landlords). These improvements in yield can be attributed to better management and more intensive use of family labor rather than to heavier applications of purchased inputs. This may reflect liquidity constraints faced by lessees who earn relatively low off-farm incomes. Even so, lessees are clearly more willing and able to farm than are lessors.

**TABLE 2** Land ownership in Son Ha and Bai Xa.[a)]

| Land type | Son Ha | Bai Xa | $t$ value |
|---|---|---|---|
| Irrigated lowland | | | |
| Mean number of plots | 1.35 | 1.89 | 2.852** |
| Mean area ($m^2$) | 574 | 509 | 0.447 |
| Nonirrigated lowland | | | |
| Mean number of plots | 0.09 | 1.11 | 9.970** |
| Mean area ($m^2$) | 64 | 701 | 8.445** |
| Arable highland | | | |
| Mean number of plots | 0.22 | 0.04 | 3.924** |
| Mean area ($m^2$) | 2402 | 42 | 3.577** |
| Forest land | | | |
| Mean number of plots | 0.67 | 1.23 | 5.854** |
| Mean area ($m^2$) | 41,991 | 34,397 | 0.287 |

[a)]Source of data: Household sample survey conducted by first author in 2012.
**Significant at the 1% level of probability.

**TABLE 3** Efficiency and equity aspects of the land rental market.[a)]

| Variables | Rental market participants | |
|---|---|---|
| | Lessees ($N = 46$) | Lessors ($N = 44$) |
| **Efficiency** | | |
| Mean value of farm equipment owned (USD) | 23.6 | 0.6 |
| Mean household farm labor force (number of people) | 2.46 | 1.00 |
| Mean annual income from crops (USD/ha) | 480.0 | 50.0 |
| Mean annual income from forest plantations (USD/ha) | 34.0 | 26.7 |
| Mean annual expenditure on seasonal crop inputs (USD/ha) | 935.0 | 870.0 |
| Mean off-farm income per capita (USD) | 90.4 | 518.9 |
| **Equity** | | |
| Percentage of female-headed households | 4.3 | 20.5 |
| Mean irrigated lowland endowment per capita ($m^2$) | 193.6 | 140.8 |
| Mean nonirrigated lowland endowment per capita ($m^2$) | 107.9 | 134.6 |
| Mean arable highland endowment per capita ($m^2$) | 112.0 | 41.6 |
| Mean forest land endowment per capita (ha) | 0.9 | 1.0 |

[a)]Expenditure on seasonal crop inputs includes fertilizer, seed, chemicals, and hired labor and machinery services for irrigated lowland. Source of data: Household census survey conducted by first author in 2012.

Equity outcomes are often observed in the temporary transfer of land from land-rich to land-poor households, and in the transfer of rental income (or part of the crop) from income-rich tenants to cash-strapped landlords, particularly households headed by widowed women, who also tend to have less family labor (Bell 1990). The data presented in Table 3 provide some evidence of rental income transferring to female-headed households, which are more prevalent among lessors than among lessees. The average annual cash rental was US$ 25, and crop shares averaged one-third of the amount harvested. However, there is no evidence of land transferring from relatively land-rich lessors to more land-poor lessees. This may reflect the egalitarian way in which land was originally allocated to households when ownership was decollectivized (Tuong Duong 2010).

Table 4 reports the amounts of land operated by lessors and lessees. When compared with the land endowments presented in Table 3, it is evident that the rental market is creating an emerging class of larger, commercial farmers. Areas operated by lessees are much larger, for all classes of land, than the areas operated by lessors. Likewise, when compared with the commune means (computed from the sample survey data), the areas operated by lessees are markedly higher for the more productive lowland classes. It can therefore be argued that the consolidation of land by emerging commercial farmers is equity-enhancing as it closes the income gap between lessees and wealthier rural

**TABLE 4** Amount of land cultivated by land type.[a)]

| Land type | Land cultivated | | |
|---|---|---|---|
| | Commune ($n = 195$) | Lessees ($N = 46$) | Lessors ($N = 44$) |
| Mean irrigated lowland area ($m^2$ per capita) | 133.2 | 290.0 | 28.7 |
| Mean nonirrigated lowland area ($m^2$ per capita) | 71.2 | 168.2 | 23.8 |
| Mean arable highland area ($m^2$ per capita) | 218.7 | 122.3 | 5.7 |
| Mean forest land area (ha per capita) | 0.6 | 0.7 | 0.4 |

[a)]Source of data: Household sample and census surveys conducted by first author in 2012.

**TABLE 5** Rental market participation in Son Ha and Bai Xa.[a)]

| | Commune ($n = 195$) | Son Ha ($n = 115$) | Bai Xa ($n = 80$) |
|---|---|---|---|
| Percentage of households that participate in the land rental market | 27.7 | 18.3 | 41.3 |
| Average number of transactions per household | 0.4 | 0.2 | 0.6 |
| Lessees as a percentage of lessees and willing lessees | 41.7 | 29.1 | 66.7 |
| Lessors as a percentage of lessors and willing lessors | 36.9 | 26.9 | 43.6 |

[a)]Source of data: Household sample survey conducted by first author in 2012.

households that generally have higher off-farm incomes (Carlettor et al 2007).

## Efficiency of the rental market

Although the rental market is generating efficiency and equity gains, this does not mean that the market itself is efficient. The data presented in Table 5 suggest that the rental market could be performing much better. The incidence of market participation is one measure of rental market activity (Crookes and Lyne 2003). In the commune as a whole, more than half of willing lessees and lessors did not participate in the market. This suggests market inefficiency—particularly in Son Ha, which has much lower ratios of actual to willing lessees and lessors than does Bai Xa. Willing lessees and lessors are survey respondents who said that they wanted to participate in the market but did not do so. The vast majority of them (80%) attributed their nonparticipation to costs and risks associated with land rental transactions. The remaining 20%, all potential lessees, were constrained by cash flow problems.

It has been contended that transaction costs increase with increasing levels of ethnic diversity, possibly due to language and trust barriers across ethnic groups (Beghin and Fafchamps 1995). The data from this study lend some support to this argument, as 84% of the observed rental transactions were conducted between households that belonged to the same ethnic group. In Bai Xa, where the Kinh account for 37% of all households, only 15% of transactions involving Kinh participants also involved Thai participants.

Disaggregation of Kinh and Thai respondents (Table 6) shows that, for both groups, most observed rental transactions were conducted between friends and relatives. Crookes and Lyne (2001) interpret a high proportion of such personalized transactions as evidence of high risk perceptions in the presence of moral hazard (the possibility that a party to a transaction may not honor its terms) and absence of an effective legal system. When legal settlements are costly and time consuming and can harm future long-term cooperation, contracting between members of the same social network is expected to reduce ex post transaction costs, as the members are less likely to behave opportunistically due to moral sanctions (Charny 1990; Tsai 2000; Cersosimo and Nistico 2008).

Another reason for the high proportion of transactions between friends and relatives may simply be proximity; the costs of finding and farming a suitable plot

**TABLE 6** Perceived rental market transaction costs.[a)]

| Variables | Actual participants | | Willing participants | |
|---|---|---|---|---|
| | Kinh ($N = 31$) | Thai ($N = 59$) | Kinh ($n = 9$) | Thai ($n = 74$) |
| Percentage of participants transacting with friends or relatives | 83.9 | 86.2 | NA | NA |
| Mean perception of transaction costs (1 = low, 3 = high) | | | | |
| Risk of land rented out being overused (lessors) | 1.27 | 1.14 | 2.00 | 2.03 |
| Risk of land rented out being claimed by tenant (lessors) | 1.09 | 1.09 | 1.50 | 2.06 |
| Risk of land rented out being expropriated by a local authority (lessors) | 1.00 | 1.09 | 1.00 | 1.36 |
| Difficulty in resolving a land dispute (lessors and lessees) | 1.42 | 1.45 | 1.75 | 1.81 |

[a)]Source of data: Household sample and census surveys conducted by first author in 2012. NA, not applicable.


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are lower for land that is owned by neighbors, and neighbors tend to be friends or relatives. In this case, better access to information about willing participants and their land or land requirements may reduce ex ante transaction costs and promote market efficiency. Administrative fees attach only to contracts that are witnessed by a local government authority. These financial costs are trivial and unlikely to affect the selection of trading partners.

While both Kinh and Thai favored personalized rental transactions, levels of mutual trust appear to be higher in the Kinh group, as the ratio of actual to willing market participants was far greater for Kinh respondents (3.4) than for Thai respondents (0.8). This could point to different levels of trust, different social norms, or different levels of confidence in the legal system between the Kinh and Thai groups. The study used a 3-point Likert-type scale (where 1 = low agreement and 3 = high agreement) to explore perceptions of transaction costs related to moral hazard. The mean scores presented in Table 6 indicate that perceptions of moral hazard were not just higher among willing participants than among actual participants, but also that, among willing participants, they were higher for Thai respondents. A similar finding holds for perceptions of legal uncertainty, although the risk of rented land being expropriated by a local authority was not viewed as a significant threat by either Kinh or Thai respondents.

## Conclusions

Survey results suggest that the land rental market is promoting both farming efficiency and equity in the study sites. The market is helping lessees who are more committed to increasing farming income and is thus reducing the income gap between lessees and lessors. At the same time, it gives households that do not have sufficient resources to farm their land effectively a chance to earn rental income by leasing out their land. However, these beneficial outcomes are constrained by market inefficiency, as expressed by the high proportion of households that do not participate in the market even though they would like to. Simple comparisons of group means suggest that participation in the rental market may be constrained by ex ante transaction costs caused by inadequate information and by ex post transaction costs associated with moral hazard and a lack of confidence in the legal system. These comparisons also suggest that levels of concern about opportunism and confidence in the legal system differ between ethnic groups. Future research should attempt to analyze the role of social capital and legal infrastructure relative to other determinants of market participation using a multivariate approach. The results are expected to inform recommendations aimed at bringing willing participants into the rental market to their mutual benefit and at improving land use efficiency.

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