

# Farmers' landholding strategy in urban fringe areas: A case study of a transitional commune near Ho Chi Minh City, Vietnam

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## ABSTRACT

Farmers in peri-urban areas across Vietnam are experiencing rapid transformations in their livelihood and land use practices. Peri-urbanization is progressing rapidly, along with the risk of conversion of large amounts of farmland into non-agricultural land. Additionally, an increasing number of laborers are moving away from both agriculture and rural areas. Understanding households' strategies in landholding and livelihood under such circumstances is crucial to the development and planning of these fringe areas. This study investigates the landholding behaviors of farmers in a transitional commune on the fringe of Ho Chi Minh City, Vietnam. Our data demonstrated that farmers delayed land transfers to their successors, adopted more flexible crop choices, and diversified their livelihoods in order to deal with the lower access to land and the outflow of labor from farming. The combination of these strategies helped farmers in Thanh Loi significantly in maintaining their landholdings and benefiting from increasing land prices, while keeping adequate levels of income. These findings suggest that peri-urban farmers should be viewed as economic entities that actively interact with the ongoing transition on the fringe to improve their own wellbeing rather than as passive peasants that are negatively affected by the process.

## 1. Introduction

The urban fringe is a region marked by rapid changes and various problems in spatial planning. In the process of peri-urbanization, rural areas on the fringes of cities gradually become more urban, often with changes in social life and conversions in land use (Ravetz et al., 2013; Webster, 2002, p. 5). In developing countries, peri-urbanization is considered a major cause of land conversions and social conflicts (Hall et al., 2011, pp. 120–1). However, contrary to the restrictions imposed on peri-urbanization in the developed world, governments of developing countries often support this process with favorable legislation and land use planning (Hall et al., 2011, p. 121; Webster, 2002, p. 10). In the south of Vietnam, for the Ho Chi Minh City metropolitan area, it is estimated that there was a fivefold increase in the amount of urban land within the period 1990–2012, of which more than 60% occurred in peri-urban communes in an unplanned manner (Kontgis et al., 2014). This situation sparks concerns about the loss of large amounts of productive farmland and its impacts on rural livelihoods.

The above concern raises the need for analyses on households' landholding and livelihood strategies under the effect of peri-urbanization. It should be noted that in this case, after the reform in 1986 (*Doi Moi*), rural areas in Vietnam underwent a rapid transformation in terms

of both livelihood and land use. The increasing connection to urban areas, made available by improvements in transportation and communication, led to a significant outflow of laborers from farming and an increase in access to rural land for non-agricultural users. These changes to the vital inputs of agriculture forced farmers to continuously adjust in order to maintain their livelihoods. In the urban fringe areas, the impact was more severe due to the acceleration of industrialization and urbanization. Understanding farmers' behaviors in this complicated context is necessary for policymaking in land use and rural development.

This study analyzed land use and livelihood changes in a commune on the fringe of Ho Chi Minh City, Vietnam, focusing on the behaviors of farmers under the pressure of peri-urbanization and industrialization. Instead of considering fringe transformation as a component of urban expansion, this study described the development of this area within the scope of rural transition, based on the perception that the rural origin and context-specific factors play a major role in forming the current situation. Farmers were the key research subjects in this study since their decisions were the important source of land use change at a local level. Historical data on households' landholding and livelihood changes were collected, together with the contexts of and motivations for their decisions. The objectives of this study were to reveal the main

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driving forces of rural land resources and to outline the main response patterns of farmers in this area under the influence of peri-urbanization and industrialization processes.

The following section reviews the policy context and previous studies on rural transition and land use changes on the urban fringe. Next, we explain our approach, the choice of the study site, and the sampling methods used. Following this, we discuss the transition path that set out the current situation of the study site, including the development of agriculture and how the area evolved with industrialization and peri-urbanization. Subsequently, we analyze farmers' strategies to maintain landholding and farming in this area. Finally, we provide some concluding remarks and policy discussions.

## 2. Literature review and research framework

In Vietnam, land policies have always been controversial with a developmental path that has been full of twists and turns. From the late 1950s until the mid 1980s, political ideology in Vietnam favored a centrally planned economy and collectivism in agriculture, which were heavily criticized due to evident damages on the economy (Kerkvliet, 1995, 2006; Ravallion and Van de Walle, 2008, pp. 24–5). After years of stagnation, the government came up with a thorough reform in 1986 (*Doi Moi*) to renovate the economy. The centrally planned approach was replaced by a market mechanism under the state's guidance. Agriculture was decollectivized, with households returning as basic production units, leading to a period of outstanding achievements in farming productivity, export, and economic growth (Giesecke et al., 2013; Pingali and Vo, 1992; Van de Walle and Cratty, 2004). In terms of land, the important changes were that land was returned to households, tenure security was gradually strengthened, and land markets were established<sup>1</sup>. The new wave of policies sparked a debate among academics about their effects on farmlands and farmers. While evidence showed that land markets were efficient tools in redistributing land in Vietnam based on productivity (Deininger and Jin, 2008; Ravallion and Van de Walle, 2008, p. 119), there were also concerns on rising disparity, landlessness, and poverty caused by their operation, especially in the rural areas (Akram-Lodhi, 2004, 2005). These effects varied among regions due to divergences in social and political contexts (Ravallion and Van de Walle, 2008, pp. 30–4). However, since the reform, there have been rapid conversions of farmland for non-agricultural purposes. For industrialization and urban development, the government often used the power of land acquisition, which was decentralized to provincial levels, and a dual system of land price that attracted huge interests from the private sector (Labbé and Musil, 2014; Phuc et al., 2014). Although the reform successfully brought agricultural land back into production and established a market mechanism for land allocation, it also led to an increasing pressure on this resource.

A growing body of literature has studied the effects of farmland loss on rural livelihoods in Vietnam, especially in areas surrounding big cities such as Hanoi and Ho Chi Minh City. Several recent case studies have described that the state's acquisitions of land in rural areas around Hanoi have pushed numerous farmers out of agriculture with signs of rising instability, disparity, and social conflict (DiGregorio, 2011; Labbé, 2011; Nguyen et al., 2016; Van Suu, 2009). On the contrary, Tuyen et al. (2014) found an indirect positive impact, in which the loss of farmlands motivates farmers in Hanoi to adopt non-farm activities to earn higher incomes. The observed effects of farmland loss on farmers' wellbeing vary with their

<sup>1</sup> It should be noted that only land use rights rather than the land itself can be privately owned in Vietnam. Land use right certificates, which are issued by the state as legal proof of the right to use land over a specific period of time can be transferred by owners. Though private ownership of land is not allowed, tenure security has been continuously strengthened thus far. The Vietnam Land Laws of 1993, 2003, and 2013 gradually increased both the duration of use and the limit on the amount of agricultural land area that a household could obtain through assigning or transferring.

individual characteristics, such as landholding size, age, education, and capital (Nguyen et al., 2016; Nguyen and Tran, 2014). The rural context also plays a part in determining livelihood outcomes in these analyses. In a comparative study by Vu and Kawashima (2017), it was found that farmers affected by land acquisition around Ho Chi Minh City were generally better off because of a higher compensation value resulting from the loss of land and by being more flexible in adjusting their means of livelihood. It can be said that the livelihood changing outcome is mutually determined by individual strategies and the context they are in.

From a transition perspective, the pressure on rural land and the outflow of labor are ubiquitous processes in various rural contexts. In Vietnam, long-term cultivation with increasing rural population was a cause for pressure on rural land before it was further exacerbated by policies toward frontier land control and forest protection, and more recently, industrialization and urban development (Kontgis et al., 2014; Meyfroidt and Lambin, 2008). Meanwhile, the hardship of agricultural life, declining access to land combined with improvements in transportation and communication, the emergence of non-agricultural employment with a chance of a higher income, and other political and social changes led to the outflow of labor from agriculture and from the rural areas (Anh et al., 2012; Huynh, 2009; Rigg, 2007, pp. 120–2).

Under these pressures, among the left-behind farmers, some strategies in land use, landholding, and farming were observed. Labor shortage and rising land prices are likely to induce farmers in peri-urban areas to sell their land to non-agricultural users, leading to land conversion. Saksena et al. (2014) found evidence that peri-urban farmers were selling or converting non-paddy agricultural land to other land uses. On the contrary, Dien et al. (2011) observed the tendency of farmers to hold onto their land, maintaining agriculture, and keeping their rural identity in the case of the Hung Yen province. Although this was not observed in Vietnam, labor shortage may lead to the abandonment of land or may induce farmers to rent out land in some rural contexts (e.g. see Kato (1994) for the case of Malaysia; Jiang et al. (2013) and Kung (2002) for the case of China). In agriculture, the adjustment of production practices such as alternating crop choices and cultivation methods, changing gender contributions in farming, and using hired laborers and machines are often used to deal with labor shortage (Paris et al., 2009). With limited access to land and decreasing returns of agriculture, the diversification or conversion of livelihood into non-farm activities is a common choice (Nguyen et al., 2016), which was evidenced to reduce the incidence of rural poverty (Van de Walle and Cratty, 2004). The diversity of farmers' strategies, again, emphasizes the importance of individual and contextual factors to the question at hand.

The process that leads to pressure on land and the outflow of labor on the urban fringe and farmers' strategies in farming and landholding under these circumstances can be generalized into the framework in Fig. 1. On the fringe of urban areas, new livelihoods emerge while agriculture becomes unattractive with exhausting resources and decreasing returns, inducing laborers to move away from farming. At the same time, peri-urbanization occurs with an increasing demand for land, pushing up land prices and lowering farmers' access to land. The responses of farmers in terms of land use and landholding might be either abandoning or renting out the land due to labor shortage; or selling the land (and moving out of farming); or holding onto the land. In terms of the livelihood mix, farmers might choose between a strategy of farming exclusively, usually with adjustments in cultivation, or a conversion into non-farming livelihoods; or a diversification of both.

## 3. Study site and sampling

Since the early 2000s, Ho Chi Minh City, Vietnam, has expanded quickly to the west leading to rapid industrialization and peri-urbanization on the western fringe, with numerous industrial zones emerging. Our study site, the Thanh Loi commune, is located in this region, about 15 km from the city border. Administratively, this commune is on the northeast side of Long An province, adjacent to the Duc Hoa district, the provincial

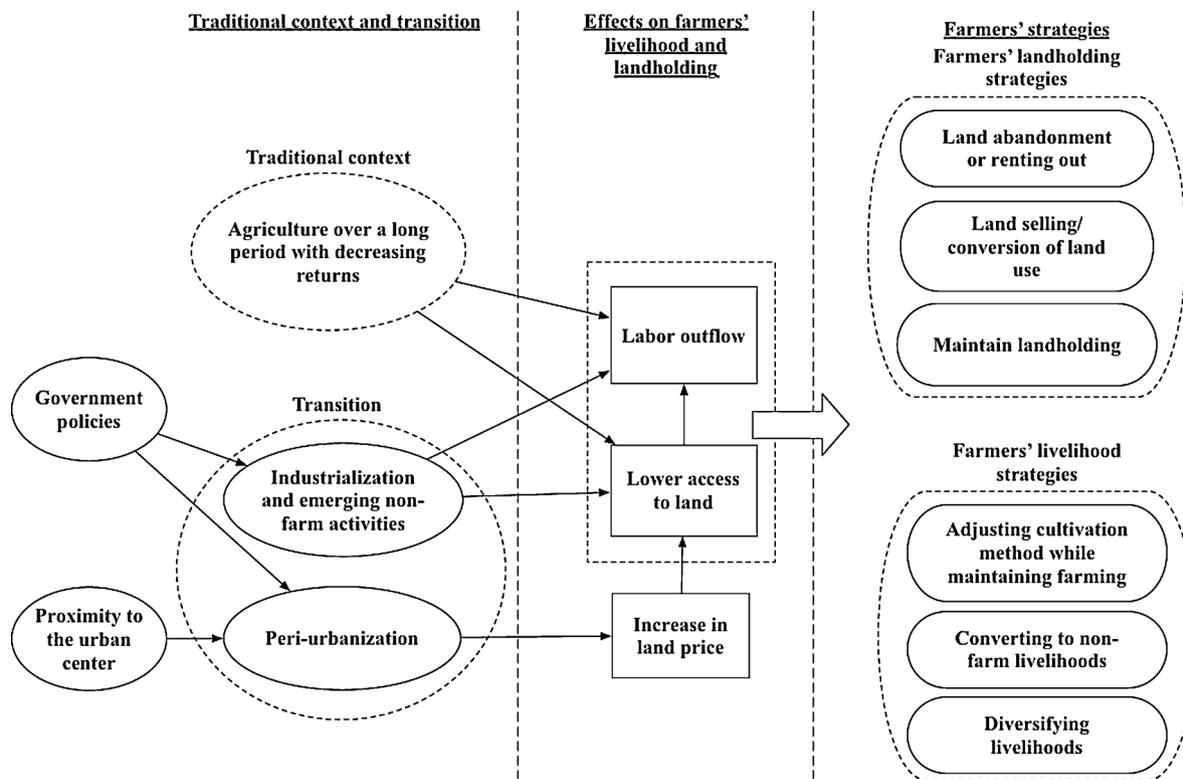


Fig. 1. A suggested framework for the analysis of farmers' landholding and farming strategies on the urban fringe.

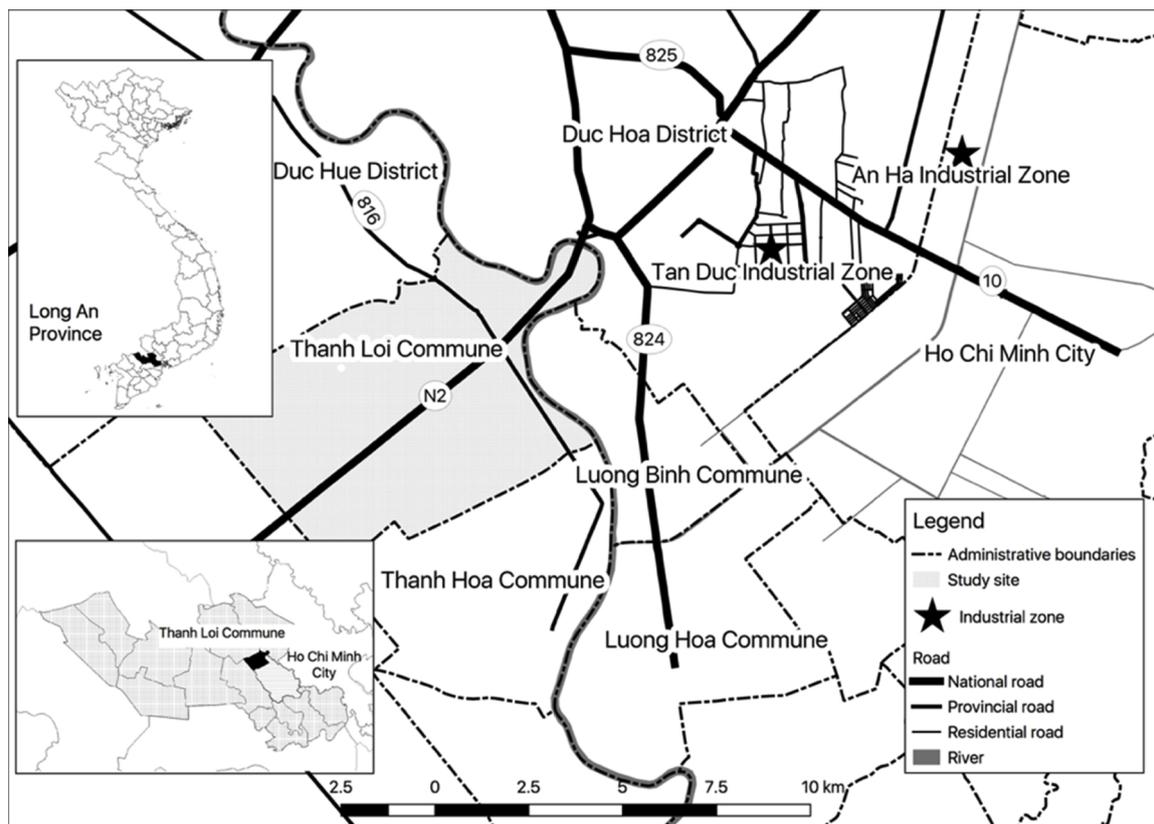


Fig. 2. A map of the study site.

industrial center (Fig. 2). In 2016, the communal population was 6910 (2006 households), and its total area was 4919 ha, of which 64% was agricultural land (3150 ha) (The Thanh Loi commune people committee, 2016). After a long history of agricultural development, farmers in Thanh

Loi started to experience the effects of industrialization and peri-urbanization when these processes were sped up around the year 2000.

Our field trips were conducted in the Thanh Loi commune from January to May 2017. The data used in this study included interviews

with crucial informants from the local government and local farmers, legal documents and reports, information from the media and national surveys. The informants from the local government were the main data sources for the historical and future direction of local development, issues in land and agriculture management and related policies. Meanwhile, the local farmers were the important actors of the transition process, whose perceptions, behaviors, and expectations reflected the evolution of the local context and will partially shape the future of the area.

As the hamlets or commune subdivisions varied in term of land use, farmers from six hamlets were included in our study. We examined their behavioral responses to the transition process, specifically with livelihood choices (or crop choices), land use and landholdings. Through random sampling, the final sample included 44 households from six hamlets, who were currently doing farming or had still been adopting this livelihood until the early 2000s, when peri-urbanization started to affect the commune. Most household heads were male (91%), with an average age of 56 years. The average schooling years of these family heads was 6.5 years. The main livelihood of these households was cultivation (mostly sugarcane and lime), with an average landholding of 1.1 ha. Extra livelihoods include wage labor, trading local agricultural products, or running small grocery stores. Other informants such as middlemen or land brokers were also interviewed for necessary information. The questionnaire focused on the historical livelihood choices of households, land use and landholding behaviors, the adaptation to emerging factors in the rural context such as the laborer outflow and increasing land prices and their plans for and expectations of, local development in the future. We also examined farmers with questions on land inheritance and the occupational choices of the younger generation.

#### 4. Agriculture in Thanh Loi commune

Until the early 2000s, farming in Thanh Loi commune mainly consisted of paddy subsistence cultivation and sugarcane farming as a cash crop. Other crops like pineapple, vegetables, cassava, and fruit trees were found in minor proportions. Before the establishment of a dam system in the early 2000s, farmers in flood-prone hamlets mainly cultivated paddies, mostly for self-sufficiency. Flooding damage could be avoided by using a flood-tolerant paddy variety or by scheduling cultivation and harvest to before the flooding season. In hamlets where the terrain was less vulnerable to flooding, cash crops were the dominant choice. Sugarcane plantations emerged in the Thanh Loi commune almost a century ago. In the early 1920s, the Hiep Hoa sugar factory, one of the earliest of its kind in Vietnam, was established in the Duc Hoa district, adjacent to Ben Luc. This induced farmers in nearby areas to cultivate sugarcane and become suppliers for the factory. Although sugarcane was more profitable than other crop choices in Thanh Loi commune, it was not adopted by a number of farmers due to various reasons such as frequent flooding due to the lack of an irrigation system, the need to produce food for their own consumption or the low sugarcane demand due to limitation in factories' capacity.

With gradual improvements in agricultural facilities and markets, agriculture in Thanh Loi quickly moved toward commercial crop cultivation following market signals. Land conditions and irrigation improved through both private and public efforts.<sup>2</sup> Markets for agricultural products developed quickly, especially in the case of sugarcane. The cultivation of this crop substantially benefited from government

<sup>2</sup>Farmers upgraded canals that covered their tracts or cleared the surrounding scrubland to enhance the flow of water during cultivation, while public efforts included the improvement of the canal system in the late 1980s and the major renovation of the dam and irrigation system in the 2000s for most hamlets of the commune.

policies aiming at expanding the sugar industry at that time.<sup>3</sup> At first, there were rapid conversions from paddy to sugarcane cultivation, reaching a peak in 2012 with 2,239 ha, about 65% of the communal agricultural area<sup>4</sup> (Table 1). However, from the early 2010s, like other sugarcane planting sites, the Thanh Loi commune observed a massive downtrend in its key farming business. The breakdown of the main sugarcane buyers led to a dramatic drop in the output price and created a loss for a considerable portion of local growers. After this disastrous event, many farmers gave up on sugarcane and converted to lime cultivation even though the emergence of new buyers partly helped recovering sugarcane price. The crop of lime made extraordinary profits with good productivity and a high market price. For farmers, lime cultivation was more profitable and flexible in generating incomes and utilizing labor. They could pick and sell the fruits once every 15–20 days during most time of the year. Lime cultivation creates a continuous stream of incomes for farmers, which is preferred to the lump sum, once a year earning from sugarcane. The conversion of sugarcane into lime cultivation was rapid. As illustrated in Table 1, total area of lime cultivation in Thanh Loi has increased more than four times since 2010, reaching 1749 ha in 2016 (half of the total communal agricultural area). The increasing rate was exceptionally high in recent years with about 145% in 2015 and 184% in 2016.

#### 5. Changing labor structure in Thanh Loi commune

Lying on the fringe of Ho Chi Minh City, the southern economic center of Vietnam, changes arrived quickly to the means of livelihood in Thanh Loi commune when transportation improved and industrialization sped up. Occupations in industrial zones and urban areas became increasingly available to local laborers. As a result, Thanh Loi laborers, especially the younger ones, moved away from farming. This led to a significant change in the local labor structure.

##### 5.1. Industrialization and transportation improvements

Industrialization in the Long An province began in around 1997 with the establishment of the two industrial zones<sup>5</sup> in the Duc Hoa district on an area of 470 ha. From 2000 to 2014, the government approved 28 industrial zone projects in this province, over an area exceeding 10,000 ha. By 2014, about 68,000 laborers had found jobs in factories there, with 30% of the laborers from outside Long An, approximately 5% of whom had a college degree or higher (Ministry of Planning and Investment, 2014). This implies that a vast labor force from within the province, especially from areas nearby, such as the study site, had found new occupations that did not demand excessive educational requirements. Besides, since the mid 2000s, transportation between Thanh Loi and other areas improved rapidly. Running across this commune is a large road (part of the Ho Chi Minh National Route) with a well-constructed bridge over the Vam Co Dong River, connecting the area with industrial and urban sites (Fig. 2). From Thanh Loi commune, it is only 13 km to the Tan Duc industrial zone in Duc Hoa district, and about 35 km to the center of Ho Chi Minh City, which are both easily accessible with the low-cost motorbikes that most households possess. The proximity of Thanh Loi to these areas and improvements in transportation opened up numerous chances of

<sup>3</sup>The policy was called “Vietnam Sugar Program”. From the output of about 500,000 tons/year of sugar in the early 1990s, the Vietnam government aimed to reach the domestic production of a million tons/year. About \$1 billion was invested in improving infrastructure for sugarcane growing and sugar milling (Center for International Economics, 2001).

<sup>4</sup>At that time, Thanh Loi and other communes in Ben Luc, such as Luong Binh, Luong Hoa, Thanh Hoa, and Binh Duc, became intensive cultivating sites of sugarcane in the Long An province, with about 8,200 ha in 2011 (Ben Luc district's 2011 yearbook).

<sup>5</sup>Duc Hoa 1 and Duc Hoa 2 industrial zones

**Table 1**

Cultivation areas (ha) of the main crops in Thanh Loi.

Source: Official data from the communal people committee of Thanh Loi

Year	2004	2005	2010	2011	2012	2013	2014	2015	2016
Paddy	485	478	24	13.3	12	9	13	13	12
Sugarcane	1,845	1,977	2,028	2,234	2,339	2,200	1,964	1,745	750
Lime	–	–	407	529.4	360	446.4	650	949	1,749
Pineapple	–	–	146	310	–	300	270	250	342

\*Data of some years are missing.

**Table 2**

Occupational choices of successors in the interviewed households.

Source: survey data

Occupation <sup>a</sup>	Agriculture	Hired laborer <sup>b</sup>	Factory worker	Office worker	Other non-agri. Jobs <sup>c</sup>	Students	n
All successors	30 23.4%	15 11.7%	49 38.3%	9 7%	16 12.5%	9 7%	128 100%
Male	19 31.7%	10 16.7%	16 26.7%	4 6.7%	7 11.7%	4 6.7%	60 100%
Female	11 16.2%	5 7.4%	33 48.5%	5 7.4%	9 13.2%	5 7.4%	68 100%

<sup>a</sup> Housewives, unemployed and under-15-year-old successors are excluded from this table.<sup>b</sup> Hired laborers do not have their own land to cultivate. They can do both farming and non-farming work.<sup>c</sup> Other non-agricultural jobs include occupations such as enterprise owner, trader, teacher, or running a small grocery store.

employment for local laborers, who could travel back and forth to work using either shuttle buses or their own motorbikes.

### 5.2. Labor moving out of agriculture

The Thanh Loi labor structure underwent significant changes. Young laborers soon found jobs in industrial zones or urban cities, leaving agriculture to old farmers. In our sample, the average age of farmers was 56 years. This quickly led to a lack of agricultural farmers. Old sugarcane farmers had to rely on intermediaries (middlemen) because harvesting was too hard to do alone. These intermediaries hired young laborers from poor areas outside of the commune, who were often willing to work hard for an income. Lime harvesting was partially preferred because it is more flexible in terms of utilizing labor. Lime farmers can easily hire laborers for harvesting as the job is not as demanding. However, in case of hiring labor, farmers confirmed that most of the wage laborers were middle-aged, and it was difficult to hire young laborers from inside the commune.

Local official data on the labor structure was unavailable, but our sample observed a strong tendency of young laborers moving away from agriculture despite the fact that their parents were mostly farmers. Table 2 illustrates the occupational choices of successors aged above 15 years (minimum labor age in Vietnam) from 40 households in our sample<sup>6</sup>. As seen in this table, only 23% of the successors (n = 128) chose agriculture as their main occupation. Moreover, two-third of the households in our sample did not have successors who carried out farming activities. Approximately 38% of the successors were factory workers in industrial zones, while 31% were hired laborers, office workers, and other non-agricultural laborers. The proportion of young women in Thanh Loi working in factories was substantially higher than the proportion of men, who were more likely to choose a hired laborer job.

### 6. Peri-urbanization and farmers' decreasing access to land

Due to the proximity to industrial zones and urban areas and with improvements in transportation, land in Thanh Loi gradually attracted the attention of outsiders. The increasing demand for land raised the

<sup>6</sup> Four households were left out of this table because they either had no children or had children that were not old enough for employment.

prices in this commune. Landholding by non-agricultural users and the growing prices of land lowered the farmers' accessibility to this resource, which was already low after other options for farmland acquiring became less possible.

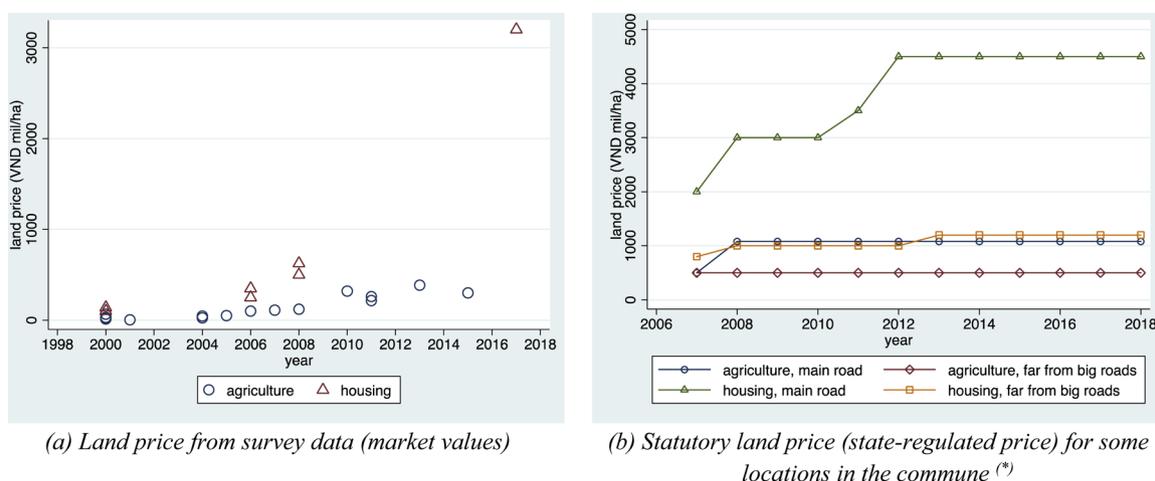
#### 6.1. Increasing demand for land from non-agricultural users<sup>7</sup>

Along the main road across the commune nowadays, the farming scenery is mixed with some factories, big houses, and land parcels that have been cleared and scraped for non-agricultural purposes. Although the situation of agricultural conversion is not serious, farmlands have gradually been transferred to non-agricultural users in an increasingly active real estate market with a wide range of participants. Besides ordinary local people who became land traders or brokers to earn extra income in their free time, local government officers and hamlet leaders, who hold valuable information and are more familiar with the paperwork, are also involved. The emergence of a relatively crowded real estate market without ample incidences of land conversion might be a contingent outcome. In 2007, with the surge of real estate industry around Ho Chi Minh City, a residential project was launched in a 2,500-hectare area in Thanh Loi commune by an investment giant at the time<sup>8</sup>. However, this project has been idle ever since without clear reason<sup>9</sup>, thus, a large area of agricultural land was still preserved. Nonetheless, the expectation of similar projects in the future prevails and will help the land market remaining active, thereby creating an increasing pressure on the local farmland.

<sup>7</sup> Since official data on land use status are not available and measuring the rate of land use change is beyond the scope of this study, the authors have provided a description of the situation instead.

<sup>8</sup> With this kind of a project, the investor negotiates with landowners to buy their land use right certificate, converts the land to non-agricultural purposes as necessary and invests in facilities such as road and drainage systems or the electrical grid. Subsequently, the investor can divide the land into tracts for housing and sell these to buyers for a higher price. This kind of project has been one of the main causes for the loss of prime agricultural land in Vietnam.

<sup>9</sup> At the time of our survey (2017), there was almost no sign of this project in Thanh Loi. Local people and even officers did not have much information on the status of the project or the causes of its idleness. However, on the administrative map of the commune inside the Communal People Committee, one could still see the details of the project with the location and expected schedule.



**Fig. 3.** The land price in Thanh Loi over time.

\*The provincial government sets the statutory price for land in different locations. This price is used mainly in land acquisition. In this graph, connected lines “agricultural, main road” and “housing, main road” show land price along the national route N2 (see the map in Fig. 2).

Source: (a) survey data, 24 transactions, (b) land price tables issued by the provincial government 2007–2015

## 6.2. An increase in land price

With the effect of the peri-urbanization process, especially with the residential project mentioned above, the increase in the Thanh Loi land price was unavoidable. Fig. 3 shows the land price in this commune from two sources: (i) land transactions from our survey data (Fig. 3a) and statutory price (Fig. 3b). The former graph plots price from 24 land transactions by households in the study sample, divided into the groups of land for agriculture and for housing. The latter graph shows state-regulated land prices for some locations inside the commune, also including land for agriculture and housing. The two types of locations illustrated in this graph include “along the main road” (the N2 national road, see Fig. 2), and “far from big roads” (unfavorable positions). Data for this graph come from official land price tables, which the provincial government periodically issues for the calculation of tax or for payment in cases of public land acquisition. From the first graph, one can see a gradual increase in agricultural land value since 2006, while little can be said about housing land prices since the number of transactions is minor and the cases are not homogeneous in terms of location. The second graph shows the increases in housing land prices at specific locations and a significantly higher price for tracts with advantageous positions. Though the statutory price for agricultural land in specific locations has not changed since 2008, the large gap between them means that there will be a significant increase in the price of farmland in case infrastructures are improved.

## 6.3. Farmers’ decreasing access to land

Over time, land has become less accessible to farmers in Thanh Loi commune. Land for cultivation can only be obtained through land transferred from parents<sup>10</sup>, by clearing new tracts, or via land markets (buying or renting). In the past, due to the significant role of farming activities, farmers usually devoted their efforts to acquiring more land, not only as a matter of personal wealth but also for the prosperity of their successors who will receive the land when they get married and have families of their own. As employment opportunities outside of

<sup>10</sup> In this inter-generational transfer, the successors receive the land from their parents in a similar manner to inheriting land. In Vietnamese custom, such transfers often happen when the successors get married and form their own households.

farming were scarce, the descendants considered the inheritance of land as a vital step in their careers. In the inheritance regime in the Mekong River Delta, parents usually divide and transfer their land to their successors in a somewhat proportionate manner, with some bias against their female successors. All the sons in the family receive similar areas of land with a bonus proportion for the ones who stayed with their parents. Gradually, with larger household sizes, over generations, landholdings became fragmented by this inter-generational transfer. Other opportunities for land acquisition also faced restrictions. Unused land available for clearing quickly became exhausted, while access via land markets did not always favor farmers.

The data gathered from the interviews with farmers confirmed that each of the acquisition practices mentioned above gradually became less feasible for Thanh Loi farmers. Table 3 illustrates the data on land transfers from 44 households in Thanh Loi commune. We divided the timeline into five periods: before 1975 (the end of the Vietnam war), from 1975 to 1990 (the restoration of agriculture with great difficulty), from 1990 to 2000 (the period before the effect of industrialization and after the first improvements were made in the irrigation systems), from 2000 to 2008 (after the establishment of the dyke system, the beginning of industrialization, and before the rapid increase in land prices due to the residential zone project), and from 2008 until the present day.

From our sample, in the households that returned after the Vietnam war (around 1975), family heads who were only in their 20s or early 30s often received generous amounts of land from their parents. In Table 3, there were 15 cases where land was transferred from their parents before 1975, with an average of about 1 ha/case. Before 1990, seven cases received land from their parents, with an average of only 0.8 ha/case. Four households cleared new land and three others had to buy land for cultivation.

Few cases of receiving land from parents can be seen in Table 3 during the periods 1990–2000 and 2001–2008. Meanwhile, buying land for cultivation was popular with 14 cases (averagely 0.9 ha/case) in the former period and eight cases (averagely 0.7 ha/case) in the latter period. Most of these farmers claimed that their parents’ landholdings were not enough to be given while still maintaining the household income. Thus, they had to buy their own tracts using their savings, support from their parents, and/or loans from relatives. The improvements in the agricultural facilities and the expansion of the sugar industry also promoted the purchase of land for cultivation expansions.

With the local government’s effort in expanding the system of canals and dikes into the undeveloped area on the west side of the commune during the period 1994–2000, a large amount of unused land became

**Table 3**

Land transfers in a sample of 44 households in Thanh Loi.

Source: survey data

Period		Until 1975	1975-1989	1990-2000	2001-2008	2008-now
Land transferred from parents	Number of cases	15	7	2	0	5
	Amount (ha/case)	1.03	0.77	1.25	–	0.49
Land clearing	Number of cases	1	4	2	0	0
	Amount (ha/case)	1	1.81	1.05	–	–
Land Buying	Number of cases	1	3	14	8	3
	Amount (ha/case)	1	2.2	0.88	0.71	0.83
Land renting-in	Number of cases	0	0	1	0	7
	Amount (ha/case)	–	–	0.5	–	1.14

available for clearing. Poor and landless households were allowed to register with the local government to clear new land for cultivation. However, this stock of land quickly became exhausted due to high demand from a wide range of users.<sup>11</sup> After 2010, clearing unused land for cultivation has no longer been an option<sup>12</sup> for Thanh Loi farmers.

Buying land gradually became more difficult under the effect of peri-urbanization. The rise in land prices since 2008 prevented farmers from making purchases of land for cultivation. From Table 3, only three cases of land purchase were recorded in our sample in this period, while renting-in land appeared as a more popular choice with seven cases. These rental activities often occurred at reasonable prices, partially due to close relationships between the owner and the tenant. Rental contracts often lasted for 5 or 10 years, which was likely to stimulate adequate investments into the land. However, the fact that most rental transactions happened between people who had close relationships implies that the operation of this market was still limited in Thanh Loi. In this period, there were also five cases that reported receiving land from their parents in this period, and their situations were quite diverse. Two among them were interested in agriculture, in which one case gave up their job in a factory, and one returned after finishing college. Three remaining cases inherited land when their parents passed away, in which one case sold a part of the inheritance to invest in a non-farming business.

Besides causing the lower access to land for farmers, the acquisition of land by outsiders was likely to result in land abandonment, which has adverse effects on cultivation by nearby farmers. After buying land, a number of buyers leave the land idle as farming income is insignificant to them. This idle land soon returns to bushland and gets flooded, which damages adjacent tracts by attracting pests and impeding the flow of water. Some farmers complained about this during the interviews. They tried to contact the owners to take the vacant plots of land on rent, but mostly failed to find them. In a few cases, after selling their land, the farmers were allowed by the buyers to continue using the tracts for cultivation. However, since they did not know when the land would be taken back, they adopted cultivars with low investment, such as timber with short lifecycles. Planting these kinds of timber often produces the same adverse effects as leaving the lands idle from the lack of regular maintenance.

<sup>11</sup> Not only local farmers desired to get unused plots in this area, outsiders also came for land. Besides, some amount of land here was also assigned to government officers as welfare.

<sup>12</sup> It is quite remarkable that, in our sample, the number of farmers clearing unused land after 1990 was low. According to interview data, land clearing was costly and cultivation on newly cleared tracts was risky. Those registered to clear new land were often households with abundant family laborers (e.g., many sons and daughters) or those who could receive help from relatives in the form of labor exchanges to gain the benefits of teamwork and larger yields. The newly cleared soil was often highly acidic and frequently inundated, so cultivation usually resulted in loss. On the other hand, the targeted households (poor ones) often had a limited ability to invest and mostly relied on incomes from wage jobs to cover their expenditure. Many individuals who received land quickly sold it after clearing for money rather than cultivating it.

## 7. Households' strategies to cope with limited access to land and labor outflows

### 7.1. Households' livelihood activities

A notable point in the development of Thanh Loi commune is the continuous effort put in by farmers in adjusting their livelihood activities to adapt to pressures on land and labor resources. In our sample, while many young laborers found non-farming jobs in industrial zones and urban centers, the cases of farmers completely moving out of farming were not common. Table 5 categorizes 44 interviewed households based on the livelihood mixes they adopted. As can be seen in the table, six households (14%) had completely given up farming and adopted non-farm activities. These cases were found under quite extreme conditions, typically when there was either a sudden shortfall of family laborers or after a disastrous event that reduced the production incentive greatly.<sup>13</sup> Among the remaining cases (86%), either households kept on with cultivation or they combined farming and other non-farming activities. It was observed that households had come up with different strategies to cope with the shortage of labor and land.

For households with modest amounts of land for cultivation, livelihood diversification was a popular choice. As seen in Table 4, about 73% of the households chose a combination of farming and non-farming activities. Among them, in 22 households (50% of the sample), some members adopted full-time non-farm livelihoods beside those who chose farming, while 10 households (23% of the sample) participated in additional activities in the time they had remaining outside of agriculture. Notably, landholding of this group (about one hectare per household) was significantly lower than households whose livelihood was only farming (about two hectares per household). Non-farming activities have become increasingly available to local people in Thanh Loi commune nowadays. Not only formal occupations in industrial zones and urban centers opened up new means for income, but also informal works such as lime sorting or packaging, trading local agricultural products, or running a small grocery store help providing employments. The emergence of these local trifling employments was important for many farmers to maintain adequate levels of income while facing barriers (age, education, and skills) to occupations such as factory worker.

In cultivation, the lack of labor induced the adoption of a crop choice that was flexible in generating income with the utilization of family and

<sup>13</sup> An example of such incidence was the case of Mrs. Tuyet's household. She and her husband had been farmers since 1989. At first, they planted paddy fields and raised ducks. In 2006, they switched to sugarcane because people around them converted to this crop. Her husband passed away in 2007, leaving her with one son and 0.5 hectares of land. Without the main laborer, cultivation declined quickly and the household income source was in danger. Her son did not want to do farming. He quit school and headed to work for a textile company and, after that, a shoes factory. She tried to maintain sugarcane cultivation, but her efforts were not enough to earn sufficient income. By 2011, at the age of 46 years, she sold the land to another farmer and became a worker herself. She found the job by wandering around the industrial zones. In our interview, she mentioned that she felt better about the non-agricultural livelihood that provided a good and stable salary and regular health care.

**Table 4**  
Livelihood mix adopted by households in the study sample.  
Source: Survey data

Strategy	No. of households	Percentage	Average household's landholding (ha)
Farming only	6	13.6%	2
Farming and extra activities in remaining time	10	22.7%	1
Diversification of activities among members	22	50.0%	1.1
Non-farming activities only	6	13.6%	0.4
Total	44	100%	

**Table 5**  
Livelihood and landholding strategies of 44 households in the study sample.  
Source: Survey data

		Landholding strategy			
		Expanding landholding	Maintaining landholding	Reducing landholding	Total
Livelihood strategy	Farming only	1 (2.3%)	5 (11.4%)	0	6 (13.6%)
	Farming and extra activities in remaining time	1 (2.3%)	9 (20.5%)	0	10 (22.7%)
	Diversification of activities among members	3 (6.8%)	16 (36.4%)	3 (6.8%)	22 (50%)
	Non-farm activities only	0	3 (6.8%)	3 (6.8%)	6 (13.6%)
	Total	5 (11.4%)	33 (75%)	6 (13.6%)	44 (100%)

hired labor. The current crop choice of lime appeared suitable in dealing with a situation of labor shortage and low access to land. Besides the advantage of a continuous flow of income as mentioned in part 4 of this paper, lime cultivation was highly flexible in terms of labor use. Contrary to sugarcane harvesting, which requires a huge amount of labor over a short period of time, lime collecting can be stretched over several days using family labor. In addition, during the peak season, households lacking labor can benefit from the increasing number of temporary wage laborers in Thanh Loi commune. These are usually old farmers who are looking for extra incomes beside their household's farming income, and prefer light work, such as lime picking.

## 7.2. Households' strategies to maintain agricultural landholding

Having maintained adequate levels of income, most farmers in Thanh Loi commune can keep their agricultural landholdings and benefit from their rising prices due to peri-urbanization. Table 5 tabulates 44 interviewed households based on their livelihood mix as mentioned above and their decisions regarding agricultural landholding since 2007 (when peri-urbanization sped up and land prices started to increase). As seen in Table 5, 38 households (86%) were able to maintain their landholdings while only six households (14%) reduced the extent of their landholdings. Five among them sold just a part of their land. With the rising land price, it was not surprising when few households (11%) could obtain more farmland.

However, with lower access to land and the outflow of labor, it is notable that farmers in Thanh Loi commune appeared to delay the transfer of land to their successors. An early transfer of land from parents to their children was a longstanding tradition in South Vietnam. In the past, young farmers received land or, at least, support from their parents to buy land when they got married and established their own households. Over time, farmers seem to keep the land for themselves for longer. Although in 37 of the 44 farming households in our sample, the family heads were 50 years old and above, only four of them (11%) had already given their land to their successors. In-depth interviews with farmers came up with some explanations. First, with too little land, the farmers kept holding on to their land, so their successors had to stay (or at least cultivate) with them for longer, which often led to household's diversification into other means of livelihood aside from farming<sup>14</sup>.

Second, their successors chose non-agricultural occupations after finishing their schooling and did not pay attention to whether they could receive or find land for farming. Besides these two reasons, the increasing land prices due to peri-urbanization gave the farmers an extra incentive to keep holding on to their land. There was a common desire among Thanh Loi farmers to keep their land as insurance or as a saving mechanism, which they could sell in the case of difficulties or to make investments in the future. The growing land prices caused by peri-urbanization, of which the trend is expected by farmers to continue, provided them with more options for their livelihood strategies. Besides, they were keen on providing land as an inheritance to their children in the future even without expecting that the next generation would continue farming on their land.

Our contention is that the delay in inter-generational land transfer is the key factor in the whole strategy mix that farmers in Thanh Loi commune adopted to maintain their livelihoods. With the currently low access to land, this strategy helps farmers retain the scale of agricultural production. If these inter-generational transfers kept occurring, land would be further fragmented to a scale which could eliminate incentives to farm and induce the abandonment or conversion of land. Having maintained a somewhat sufficient scale, farmers could then move on to pursuing additional strategies to keep their farming activities going with the lack of labor or diversify into other activities for extra incomes instead. Henceforth, they would be able to avoid making distress sales of their land and would be able to move on with extra livelihood strategies in the future.

To test whether this pattern of delaying inter-generational land transfer was popular in Vietnam, we used the Vietnam Household Living Standards Surveys to calculate the proportion of households receiving land from parents across the country, in the Mekong River Delta, and Long An province. Data on this kind of land transfer can be found in the Viet Nam Household Living Standards Surveys 2004 and 2014. We focus on the group of rural households with heads whose ages range from 15 to 40 years. The exclusion of older cohorts was intended in order to leave out households that would inherit land from their

(footnote continued)

had two daughters, one who was a worker and the other was a homemaker partly because of the lack of land. Since they had a small amount of land, his sons had to cultivate it with him and the output from the farm was not enough for the household's consumption needs. His sons, after marriage, remained in his house. Outside of farming, Mr. Van, his wife, and two sons have to work as hired laborers in a wide range of fields.

<sup>14</sup> An example of this situation was the case of Mr. Van, who had only one hectare of land. He had two sons, who chose the farming life over working in factories because they did not have adequate educational qualifications. He also

**Table 6**

Proportion of households with head's age from 15 to 40 inheriting agricultural land.

Source: Author's calculation using data from the Viet Nam Household Living Standards Surveys 2004 and 2014

Dataset	VHLSS 2004		VHLSS2014	
	No. of rural households	No. of households with land received from parents	No. of rural households	No. of households with land received from parents
Whole country	2,315	618 (26.7%)	1,769	389 (22%)
Mekong River Delta	407	163 (40%)	320	78 (24.4%)
Long An	36	12 (33.3%)	29	7 (24.1%)

parents upon their passing, which was not comparable to our findings. Moreover, in the 2014 survey, households with this characteristic were likely to start their own livelihoods in the 1990s or later, when industrialization in Vietnam began to accelerate, which is a similar context as that in our case. The results are shown in Table 6. With the 2004 survey, in the nationwide sample of rural households in the age group of 15 to 40 years, about 27% of them received agricultural land from their parents. This rate was 40% in the Mekong River Delta sample and about 33% in the Long An sample. In the 2014 survey, this rate decreased to 22% for the entire sample and 24% for both cases of the Mekong River Delta sample and the Long An sample. These results suggest that there might be a trend of delaying land transfers from parents to their successors among rural households in Vietnam. However, the rate is generally higher than the one in our study sample of Thanh Loi commune. This implies that the pressure on resources that induced a delay in inter-generational land transfers in the urban fringe areas around Ho Chi Minh City might be greater than a general rural context.

### 7.3. Farmers holding onto farmland in peri-urban areas and its role in the Vietnamese context

The tendency of farmers holding onto their farmland, delaying land transfers to their successors, and adjusting their livelihood activities to adapt with surrounding changes while benefiting from the increasing land price in Thanh Loi commune provides some insights for the ongoing transition in Vietnamese peri-urban areas. First, while de-agrarianism in rural areas and a higher share of land for non-agricultural uses are inevitable trends (Chen et al., 2014; Foley et al., 2005), farmers' livelihood outcomes depend on the pace of transition. Such adaptation strategies in our case illustrate peri-urban farmers' efforts in smoothing the transitional path that they are experiencing and actively taking advantage of the changes around them to improve their own livelihoods. Secondly, since inter-generational land transfers for farming has been a longstanding tradition in Vietnam, the delay of farmers in handing over farmland to their successors should be expected in other rural areas with pressure on land resource elsewhere in the country as well. However, it seems that this pattern is more likely to be found in the context of South Vietnam, especially in the urban fringe, where farmland conversions are often carried out under market mechanisms, contrary to the case of the North where compulsory acquisitions are favored in obtaining land for industrial and urban development (World Bank, 2011, p. 32). In our case, farmers were active participants in land markets, thus being able and having greater incentives to hold on to land, which is impossible in the case of compulsory land acquisition. Besides, average household landholding is quite large in the South (Vu and Kawashima, 2017) while being small and highly fragmented in the North (Pham et al., 2007). The greater landholding size could benefit southern rural households in various ways such as the higher flexibility in crop choice or the more generous incomes from cultivation.

This case study calls for a more active and economic view of peri-urban farmers, especially in the southern context of Vietnam. These are individuals who actively adjust their livelihoods under peri-

urbanization effects rather than just being passive peasants whose livelihoods became more difficult and risky because of this process (Nguyen et al., 2016; Van Suu, 2009; Vu and Kawashima, 2017; Vu, 2006) or being conservative rural residents trying to preserve their rural identities against external changes (Dien et al., 2011). In Thanh Loi commune, farmers took advantage of their location (expecting a further rise in land prices) and altered their livelihoods based on the resources available (adopting flexible crop choices and diversifying income sources). Their desire to keep their land for the next generation, whom they did not expect to carry on farming, might reflect their way of thinking beyond the rural identity. For such reasons, farmers should appear in the analysis of the peri-urban transition more as economic entities interacting actively with the ongoing transformation, rather than being tied to farmlands and agriculture, which restrict their ability in improving their own livelihood.

## 8. Concluding remarks

This study analyzed the landholding behaviors of farmers within a transitional commune on the fringe of Ho Chi Minh City, Vietnam, who were under the pressures of peri-urbanization and industrialization. In this commune, land became increasingly hard for farmers to access, especially when peri-urbanization occurred. Meanwhile, opportunities for non-agricultural employment, especially in industrial zones and urban centers, combined with developments in transportation, led to the outflow of young laborers from agriculture. We found that farmers delayed inter-generational land transfer to prevent further shrinking in their landholding, in order to deal with the lower access to land. In addition, they adopted a flexible crop choice, increased the use of hired labor, and diversified into non-farm activities in order to maintain adequate household incomes. The combination of these strategies helped farmers hold onto their land and benefit from the rising land prices due to peri-urbanization. The case of Thanh Loi commune suggests that peri-urban farmers should be viewed as economic entities that actively interact with the ongoing transition on the fringe to improve their own wellbeing.

This case suggests that farmers might play an important role in coping with the negative effects of peri-urbanization in developing countries, where government policies are often inadequate. In the context where farmers could switch between crop choices to efficiently utilize the amount of resources available to them and where there were abundant opportunities for diversification, Thanh Loi farmers tended to endure difficulties such as the low access to land and labor. Therefore, the improvements in agricultural flexibility and opportunities for additional incomes for people in rural and urban fringe areas should be considered in policies making directed at preventing farmland loss and farmers' landlessness.

Besides, although it is not a focus of this study, the transition in Thanh Loi commune implies that land policies toward strengthening tenure security and developing land markets might lead to the loss of farmland and prevent farmers from accessing land in peri-urban areas. Contrary to the economic statement that land markets would help distribute farmlands to producers with higher efficiency, this demonstrates that the increasing price of land due to peri-urbanization caused

farmers to face significant difficulties in the expansion of their cultivation. The rental market did not help as the incentive to rent out land was low. From the case of the peri-urban commune of Thanh Loi, it is suggested that current land policies in Vietnam should be augmented with better regional planning to support farmers in accessing farmland.

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