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Are free land arrangement really free? An exploration into
land arrangements made by rural-urban migrants in the
Northeast of Thailand

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Abstract

This paper contributes to an emerging literature on free land arrangements in developing countries. We argue that in-depth empirical analysis is crucial to understand the specific terms of land arrangements. Using mixed quantitative and qualitative data collected among rural-urban migrants in Thailand, we categorize land arrangements along four dimensions: self-reported categories by the actors, the nature of the relationship between the parties involved, the nature of the payment made, and how explicit or binding are the contractual terms. The economic motivations in each of the consequent categories of land arrangement are then analyzed with simple econometrics. Our main results suggest that while free land arrangements are allegedly common practice in Thailand, only a small number of these free arrangements are really free. Many appear to be a ‘disguised form of rental contract’, similar to sharecropping except for the fact that they are reported as free arrangements. Disguised rental is often found among households who rely heavily on the safety net function of land. Our results also suggest that the arrangements which do not involve any direct repayment or compensation are often parts of complex inter-vivo bequests, and involve incomplete transfers of property rights.

Keywords : Land Market, Vulnerability, Poverty, Income Shocks, Subsistence Agriculture.

Jel code: O12, O13, O17; O53

1 INTRODUCTION

Compared to communal tenure, free land arrangements made over private land have been little explored in the development and land tenure literature, despite being common practice in many transition economies. Three explanations can be given to this relative lack of research: first, the economic literature has largely relied on a segmented view of land tenure (Demsetz, 1967) where communal property coincide with free or non-market arrangements, while private property creates favourable conditions for land markets. Non-market arrangements in private property regimes are therefore hard to conceive within the standard framework (Promsopha, 2017). The second reason is scant data on non-market land transactions in general, and especially so for free land arrangements. Finally, the traditional quantitative methodologies used in economics have had to cope with a vague and imprecise definition of what ‘free land arrangements’ really entails in developing countries (Colin, 2008; Berry, 1994). The anthropological literature teaches us that in traditional economies, an exchange often follows complex rules that are not immediately visible to the external observer.

The literature has either ignored free land arrangements in its analysis, as in the land contract literature (Newberry and Stiglitz, 1979; Otsuka et al., 1992; Bezabih, 2009), which looks at sharecropping and fixed-rent, but ignores the ‘free arrangement’ alternative; or it has considered free arrangements as a specific form of intra-family transfer disconnected from alternative land contracts, i.e. sharecropping or fixed rent contracts (Delpierre et al., 2012).

Drawing on the main conclusions from these two streams of literature, we argue that free land arrangements must be understood as just another form of land use rights contract, but with the singularity that the contractual terms and the nature of the repayment made in exchange of use rights are much more complex to grab empirically. This paper puts forward that households pick from a variety of contractual forms when transferring land use rights, each form involving various degrees of market and reciprocal motives.

In this paper, we combine qualitative and quantitative data on the land arrangements settled by Thai permanent rural-urban migrants while being away. We propose a framework to look into land arrangements along three dimensions: the nature of the relationship between the parties involved (1), the nature of the payment or compensation made (2), and the explicitness of contractual terms (3). This framework is then applied to categorize land arrangements, the economic rationales of which are finally explored with a simple econometric analysis.

We find that despite a large number of transfers which are reported as “free arrangements” by Thai rural-urban migrants, only a small portion are *de facto* free. Most free arrangements are made in exchange of some form of repayment, and in some cases, the nature, explicitness and amount of this repayment does not differ much from sharecropping arrangements; the only difference being that they are reported as “*free arrangements*” by respondents. We label this last type of transfer

‘disguised rental’ or ‘disguised sharecropping’¹. Disguised rental mostly takes place between members of the risk sharing network - ‘extended relatives’ or *Yaadt Phi Nong* in Thai language. The econometric analysis also reveals that households offering their land as ‘disguised rentals’ value the safety net value of land more than others and are risk adverse. Finally, risk-coping motives appear more significant when ‘disguised rentals’ are considered as a distinct category, which stress the importance of thorough empirical methodologies when analysing land contracts.

Section 2 introduces the paper’s framework to characterize land exchange. Section 3 presents the context of land rights in Thailand and the data. Section 4 analyses the terms of land arrangements among Thai rural-urban migrants using the framework introduced in section 3. Section 5 gives the results of a simple econometric model of the economic rational which can be involved in the different observed land arrangements. Finally, the paper discusses the main results of this investigation and concludes.

2 A framework for analysing land arrangements

(a) The general framework

Attempts to provide a continuous typology of land allocation systems - rather than a binary private vs. communal as found in the standard theory of property rights (Demsetz, 1967; De Soto, 2000; Feder and Nishio, 1998) - can be found in approaches such as Berry (1997), Schlager and Ostrom (1992), Ostrom (2001) or Colin (2008). While keeping their emphasis on a richer classification of land property systems, our own framework focuses on the arrangements made within a defined property regime, which we account for in details but consider exogenous in our analysis². Our main purpose is to provide a general methodology allowing observers and empirical models to draw on typologies of land arrangements matching local specific conditions and reflecting the diversity of possible contractual terms.

The literature has identified three main features seen as ‘pivot’ in reflecting the market - rather than non-market - nature of exchange. Exchanges in land markets are supposed to be impersonal (1), monetized (2), and set at explicit market prices (3). On the other hand, non-market transfers or gifts/counter-gifts are supposed to be personal (1), unmonetized (2), and based on implicit or lagged compensation systems (3). However, empirical and field studies such as Chimhowu and Woodhouse (2006) or Sjaastad (2003) suggest that these three criteria - impersonality (1), monetization (2), and explicit contractual terms (3) - are rarely found perfectly aligned, which sometimes makes market and non-market arrangements difficult to characterize. Instead, various combinations of the three criteria can be found in ‘hybrid’ forms of land arrangements present-

¹In reference to the notion of ‘disguised sale’ used for transfers which are sales disguised as gifts (Colin and Ayouz, 2006).

²We do not assume in this paper that there is a deterministic relationship between the nature of property rights and land arrangements.

ing both market and non-market characteristics. An arrangement may for instance be personal, unmonetized, but be set at an explicit market price³. Each of the three criteria - impersonality, monetization, explicitness - should be seen as evolving in a continuum, and therefore be measured in a continuous scale rather than through a discrete 0 to 1 indicator⁴.

The combinations of the three continuous characteristics - impersonality, monetization and explicitness - must at some point be compared with the categories under which the actors involved refer to their own arrangements. Discrepancies between how the actors refer to their arrangements, and what they do in reality, might be powerful revealers of social norms and legitimacy or institutional issues such as moral prohibition -or obligation. (Colin and Ayouz, 2006) for instance accounts for "disguised sales", i.e. sales disguised as gifts in contexts where land sales are not permitted by local communities.

In the end, observers should be able to infer regularities from the various forms of arrangements recorded in their data and draw typologies that are both both representative of local specificities and coherent with the diversity of land arrangements.

(b) Defining impersonality, monetization, and explicitness of contract terms

For the purpose of data analysis, we now go through a more definite description of the three criteria put forward to characterize land arrangements.

- Impersonality (1): A relationship is considered perfectly impersonal if the two parties have not met each other in the past nor will interact in the future; and perfectly personal if the two parties have known each other for a long time and can hardly avoid repeated interaction in the future (North, 1984). In other words, according to Greif (2002)⁵, exchange is impersonal when, "*in deciding whether to exchange or not, one did not rely on knowledge of the past actions of one's partner in the exchange*". A perfect example of personal exchange takes place between parent and child, and on a continuous scale, becomes perfectly impersonal when transactors are perfect strangers. In the literature, personal or repeated interactions between parties are found to correlate with non-market exchange and lack of formal third party enforcement. The motivations in personal exchange may also include issues of reputation, trust, asymmetries, social norms, or even altruism. On the other hand, the price mechanism allows impersonal exchange.
- Monetization (2): A monetary transaction of land involves a liquid repayment - in cash; while

³Or be impersonal but monetized with implicit compensation systems; or any other combination.

⁴There are indeed degrees in the evaluation from purely impersonal to purely personal, or from purely monetized (liquid) to purely unmonetized (illiquid) arrangements.

⁵p.159

a non-monetary transaction of land involves no repayment or an illiquid repayment - in-kind. The liquidity of the repayment is a good indicator of the monetary nature of the transfer. Although economic theory has not systematically associated markets with the use of money⁶, empirical evidence suggests that marketization goes hand in hand with the monetization of on land transactions (Chimhowu and Woodhouse, 2006; Colin and Woodhouse, 2010).

- Explicitness of contractual terms (3): A compensation is said to be explicit if it involves a compulsory payment at a price that has been explicitly - orally or by writing - negotiated and agreed on by the two parties. An implicit compensation, on the other hand, has never been explicitly negotiated or agreed on by the two parties, and is repaid on a ‘voluntary’ base - therefore not binding. The explicit nature of the compensation helps to differentiate between gift/countergift and market compensation systems. Market requires simultaneity between exchange and requirement of payment while the gift/counter-gift exchange relies on a time separation (Neru, 2010): markets need visible prices to clear, while on the other hand, gift giving is “*reciprocated without certainty*” (Offer, 1997)⁷.

Market and non-market exchange have often been related to specific types of motivations: self-interest or welfare maximization in sale or rental; reciprocity or insurance in gifts and free arrangements. On the other hand, the nature of economic motivations involved in ‘grey zone’ transfers are not transparent *ex ante*.

3 Context and data

(a) Property rights in Thailand

Thailand’s land history is singular. First, land did not become a symbol of power until mid nineteenth century⁸ (Mehl, 1986), and by then the Thai monarchy had already imposed a ceiling on land holdings. Secondly, a long migration history and the nature of the technology used in rice cultivation have favoured small-scale farming and limited land concentration (Mehl, 1986; Foster, 1984). As a result, Thailand has maintained a low rate of landlessness: around 3 farmers on 5 are landholders (Phelinas, 2001). Thirdly, Thailand has a well-established land administration which has traditionnaly favoured small and family holding. Individual - rather than communal - ownership of land has also been facilitated by formal recognition of freehold by the monarchy in 1872 under the reign of King Chulalongkorn. A land titling system (Department of Land, DL)

⁶Barter is indeed considered as market.

⁷In the tradition of Mauss (2001), gift giving works through compensations with no explicit price. Various studies such as Akerlof (1982) have described in economic terms the compensations of gifts as responding to social norms rather than to explicit negotiations.

⁸Labour intensity in rice cultivation and land abundance made the control of labour resources imperative.

has been created as soon as 1901 and a Land Code in 1954.

Thailand is also well-known for its successful land titling policy in the 1980's, which is often put forward to illustrate the beneficial effects of privatization and formalization (Feder and Onchan, 1987). The seminal work of Chalamwong and Feder (1988) or Feder and Onchan (1987) shows how the first stage of the reform contributed to the development of financial markets and an increase in agricultural productivity. The closure of the land frontier in the 1980's and growing land scarcity made land titling desirable for local farmers confronted to land-grabbing or demanding access to formal credit. Traditionnal communities therefore opposed very little resistance to the 1980's land titling programm⁹.

But while the effects of this large scale land reform are shown significant for the development of credit in rural areas (Chalamwong and Feder, 1988; Feder and Onchan, 1987), its impact on land allocation, the development of land markets, or the nature of land arrangements, is not well-understood. Land markets existed long before the formalization of land rights, and turnover rates seems more easily influenced by the expansion of urban areas than by the issuance of land titles (Grandstaff et al., 2009).

(b) The Northeast: Economy, land, and rural anthropology

The land arrangements recorded in our data are initiated by rural-urban migrants from the Northeast of Thailand, which is the poorest region of the country with a subsistence and low-yields agriculture, despite the recent growth of cash-cropping and contract farming. Land is especially poor and drought-prone. The Northeast is also the first reservoir of rural-urban migrants in the country, many of which leave their home region to settle in Bangkok.

The turnover in Northeastern land markets is remarkably low: according to Phelinas (2001), less than 10 per cent of available farmland has been acquired through purchase, and the rental market involves just over 5 per cent of available agricultural land.

It is also in the Northeast that communal solidarity and organizational capacities in communities seems the highest and non-market land arrangements the most visible (Molle, 2002). Non-markets land arrangements have yet rarely been investigated in details (Grandstaff et al., 2009). Rice fields are synonymous of being well-fed, while cash-cropping on the highland yields higher but riskier income: as a consequence, the economic and social status of rice fields differs radically (Moerman, 1968; Vanwey, 2003).

Finally, anthropologists often have approached land allocation patterns through family structures and inheritance, highlighting the importance of small networks of relatives based on *coresidence*, i.e. relatives who share or have shared a same roof (Embree, 1950), and called *Yaadt phinong* (Foster, 1984; Whittaker, 1999). Following the dominant matrilineal structure, the *Yaadt phinong*

⁹Except for mountainous ethnic groups.

network commonly includes members of the extended family on the mother side: parents, siblings, uncles and aunts¹⁰. The *Yaadt Phinong* institution is key to solidarity mechanisms and access to land. Traditionally, land is bequeathed to daughters in equal shares at the time of marriage, with sons accessing land through their wife upon marriage, or through forest clearing. The youngest daughter cultivates her parents' holdings and inherit their house and a larger share of land post-mortem. Yet, with marriage happening later in the life cycle and the closing of the land frontier in the 1980's, inheritance practices are evolving toward equal share inheritance among all children - sons and daughters - to avoid a surge in landlessness¹¹. Bequests often give way to *ex-post* arrangements among siblings to limit land fragmentation (Grandstaff et al., 2009), but the specific terms of such arrangements are not well-known.

(c) Survey methodology

We use mixed qualitative and quantitative data collected in Thailand in 2010 to analyse the arrangements settled by migrants on their farmland when leaving home. The target population is made of rural-urban migrant households coming from the Northeast of Thailand and settled permanently, i.e. not seasonally, in Bangkok; and holding some land in their home village. Information on land arrangements was gathered in two steps: a qualitative field study in rural areas looking at land arrangements from the tenants' perspective; and a quantitative survey among migrant landholders living in Bangkok, and designed for econometric analysis. The tenant from the qualitative survey and the migrant landlords from the quantitative survey are not matched: respondents opposed a strong resistance to provide the contact information of their tenant/landlord and we had to abandon the ambition of a matched analysis of the supply and demand sides of land arrangements.

The quantitative database provides quantifiable and statistically significant evidence, while semi-structured interviews help us draw general intuitions and design an identification strategy for hypothesis testing. It is also a precious tool to make interpretations on some of the unexpected statistical results, and to highlight the meanings that individuals give to their actions. Overall, stage 1 and 2 are complementary and provide a meaningful picture of land arrangements backed-up by statistical evidence.

The fact that data are collected among migrants has important consequences for most of our results. Migrants are specific in many ways: their involvement in agriculture, their relation to land and rural family or social networks, their risk aversion, and so on. Our results therefore only

¹⁰This network is therefore larger than the nuclear household but smaller than a kinship or matrilineal line.

¹¹The closure of the land frontier forbids land clearing as a mean of access to land. Therefore, the tradition to exclude sons from land bequest may lead them to landlessness. Moreover, with marriage happening later in life, sons (who traditionally accessed land through their wife) may have no land to cultivate until their 30's: parents therefore prefer to give some plots of land to their sons as well as their daughters.

apply to this particular population.

Qualitative data

Qualitative data have been collected in six villages located in Khon Kaen province, Northeast of Thailand, through semi-structured interviews with the village headmen and 29 close relatives or the tenants of permanent migrant households, with information on 34 land arrangements. The agriculture in Khon Kaen province is a mix of rice fields and highlands devoted to cash crops - cassava and sugarcane mainly. The land is particularly dry and of poor quality despite recent public investment in water management and irrigation. Six villages were randomly sampled from the Community Development Department Database 2009 - a national annual survey of rural communities. The selected villages display varying levels of out-migration, some heterogeneity in land quality and land scarcity, but a uniformity in the degree of commercialization in agriculture.

40 per cent of our respondents are the parents of the migrants, and the rest are siblings or more distant relatives from the “*Yaadt Phi Nong*” network currently using the migrant’s farmland. The average age of respondents is 48, with farming as main profession, and 59 per cent of respondents are women. 45 per cent of the land involved in arrangements is suitable for cash-cropping, and 1/4th can be qualified as poor, even compared to the province average standard. 2/3rd of the migrants are qualified as poor or very poor by respondents, and 1/3rd as rich or very rich. Around 40 per cent are said to be involved in independent occupations such as street-selling or small business; 30 per cent in low skilled factory work; and 10 per cent in high skilled activities including government workers.

Quantitative data

The quantitative survey was implemented in Bangkok with migrants from the Northeast established permanently in Bangkok, i.e. not on a seasonal basis, with the purpose of gathering a large database on their economic situation, their migration history, and the land arrangements made on their farmland.

This second phase is therefore designed for econometric analysis. 467 migrant households were selected under a non-randomized process. Given the lack of a recent census, we used complementary sampling methodologies, from snowballing to accidental sampling. Out of the 467 households surveyed, we obtain 475 temporary land arrangements. 15 observations have been removed from the final sampling because they involve forest land with very specific land arrangements which are not well-informed in the questionnaire. The 460 remaining arrangements all involve temporary and partial transfers of land rights.

Besides general demographic and economic information on the migrants and their migration history, the questionnaire provides information on the nature of the land and property rights, the

relationship with both rural and urban *Yaadt Phinong* (network of relatives), the terms of land arrangements, the relationship with the tenant, the nature and amount of repayment, and the duration of land contracts.

4 Land arrangements: Descriptive statistics

We now apply the framework described in section 2 to our Thai data. We examine the nature of the repayment involved in land arrangements, i.e. whether it implies a monetary transfer set with explicit terms; we characterize the nature of the relationship between the parties involved through a precise reviewing of local land rights and anthropology; we compare the characteristics of the arrangements with the categories reported by respondents. The following analysis mixes qualitative and quantitative results.

(a) Land arrangements and nature of the repayment

Quantitative data show that 86 per cent of the land arrangements made by rural-urban migrants are reported by respondents as “free”, and the rest as “rentals”, with 8 per cent as “sharecropping”, and 6 per cent as “fixed-rent” contracts¹². Rental contracts and sharecropping are therefore scarcely used by migrants, who favour free arrangements.

The semi-structured interviews suggest that sharecropping and fixed rent contracts are both considered as rental and first referred to as “*haay chaao*” by respondents, but have specific, well-established, structured and stable rules that differentiate them. Fixed-rent contract are called “*haay chaao pen gnoen*”¹³. In a fixed rent contract, tenants offer a cash deposit and pay a rent in cash, with an amount fixed by the landlord before the cropping season, i.e. at the sealing of the contract. In a sharecropping contract - called “*haay chao pen pecent*” - literally “rental as a percentage” - tenants and landlords negotiate the share of the harvest to be paid at the end of the harvesting season. The payment is either in-kind, i.e. a share of the harvest is delivered to the landlord; or in-cash, i.e. the tenant sells the harvest and gives a share of his revenues to the landlord. The chosen arrangements depends on the types of crop and transportation constraints. Shares paid in-kind are more frequent on rice fields, especially if the landlord intends to keep the harvest for his own consumption. On land planted with cash crops, the share is almost always paid in cash due to higher crop transportation costs.

On the surface, free arrangements also seem like a structured category of arrangement, commonly referred to as “*haay chay fee*” in Thai language, literally “*give use for free*”. Yet, the semi-

¹²Only 5 households declare leaving their land unused: unused land risk being seized by the State.

¹³Literally: rental in exchange of money.

structured interviews reveal that the “*haay chay fee*” category actually includes different types of arrangements. Respondents generally stayed with a “*haay chay fee*” response and often denied engaging in any monetary payment or compensation; yet indepth qualitative interviews suggest that the so-called free arrangements are not necessarily without any compensation, for instance in the form of gifts. The structure of the quantitative questionnaire was therefore designed to go beyond the generic “*haay chay fee*” idea. All respondent migrants - including those involved in free arrangements - were asked whether a payment was expected in exchange of the land, of which nature and in which quantity. Surprisingly, many respondents involved in free arrangements report a payment. When households did not report receiving a “payment”, the questionnaire asked whether they were given something by tenants - on a voluntary basis - and if yes, of which nature and quantity. Gifts are mainly seen on rice fields, and are reported as ‘bags of rice’.

The quantitative data - supplemented by qualitative interviews - shows that the “*haay chay fee*” category actually includes three different types of arrangements. First, in 21 per cent of free arrangements, no official payment or gift is reported. Of course, there are no guarantees that such arrangements do not actually involve longer-run and more implicit and unbinding exchanges of services - with landlordss holding a dormant claim on their tenant - but our data do not capture such time-separated exchanges: we considered these arrangement as **free**. Secondly, in 66 per cent of free arrangements, gifts are received in exchange of the land, the quantity and nature of which is decided freely by the tenants, and declared as ‘facultative’ and unbinding. We call these arrangements **free with implicit compensation**. Finally, the last 13 per cent of free arrangements are called “*haay chay fee*” by respondents, but are made with an explicit payment, which is decided by the landlord and compulsory for the tenant - even if easily renegotiated when the conditions requires it. We call this last form of free arrangement: **free with explicit payment**.

(b) Payment and gifts: how and how much

In our data, payments are reported in three different forms: 1. a fixed amount of money reported in Thai Baht; 2. a share of the output declared in percentage; 3. a number of ‘rice bags’. In the case of output shares, respondents were able to give an approximation of the output received in kilograms, but not of the monetary equivalent, i.e. in Thai Baht. In the case of ‘rice bags’, respondents were unable to convert in kilograms or in monetary value : rice bags are of different sizes and their content could only be approximated as ‘big’ or ‘small’. ‘Rice bags’ actually appeared as units of measurement of their own. To conclude, the form of payments or gifts seem to involve different degrees of liquidity or monetary nature: fixed amount are monetary, shares less so, and rice bags are not converted in monetary values by respondents.

Table 5.1 displays the different forms of repayment according to different categories of arrange-

ments. Unsurprisingly, fixed rent contracts are paid with fixed amounts of money, and sharecropping contracts as a share of the output. In free arrangements, rice bags are more frequently found but shares are also reported - it accounts for 17 per cent of all free arrangements but correlates mainly with arrangements where an explicit payment is involved. On the other hand, rice bags are mainly found in arrangements with unbinding gift-giving.

Table 1: Type of repayment for the use of land (per cent)

	All free arrang.	free	free-implicit	free-explicit	sharecropping	fixed-rent
No payment	21.2	100	0	0	0	0
Rice Bags	64.6	0	89.9	19.6	2.6	0
Share	17.1	0	10.1	80.4	97.4	0
Fixed amount	0	0	0	0	0	100
Total	100	100	100	100	100	100
Obs	391	85	257	51	39	28

Table 5.2. reports the estimated market value of the reported payments or the gifts. In the case of output shares, we rely on respondents' estimation of the share in kilograms - cross-checked with information on land size and quality - and convert it using 2010 farmdoor prices data for the Northeast. In the case of rice bags, we calculate rice quantities measured through an approximation of rice bags' capacities - around 50 kilograms for small bags and 100 kilograms for big ones - and convert it using farmdoor prices for rice.

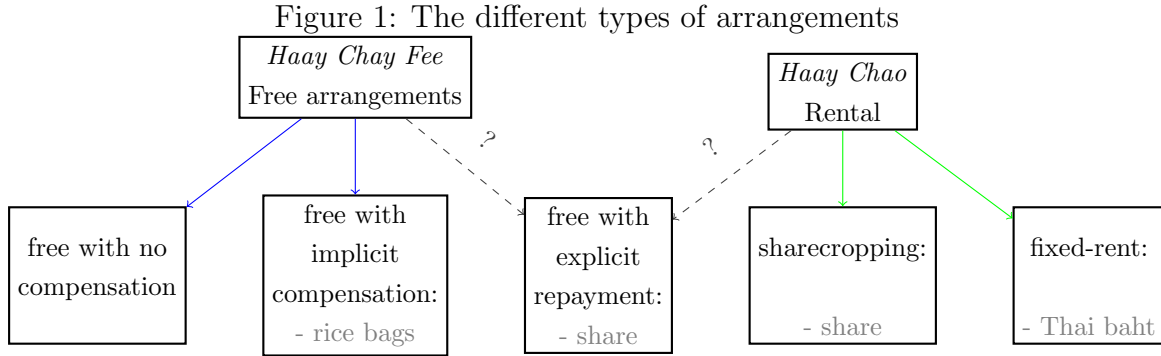
Table 2: Market value of payments or gifts (*in THB*)

	Mean	Standard dev.	Min	Max	N
Free arrangements with no payment/gift	0	0	0	0	89
Free arrangements, implicit/gift	304.4	491.3	0.4	3520	258
Free arrangement, explicit/payment	1250.3	597.3	75.4	2640	49
Sharecropping	1465.7	859.5	158.4	5000	36
Fixed rent	920.3	862.9	150	4000	28
All free arrangements	357.5	576.7	0	3520	391
All rental (<i>sharecropping</i> + <i>fixed-rent</i>)	1138.4	920.4	0	5000	69
All	474.6	697.1	0	5000	460

Given the approximations needed to obtain monetary values in table 5.2 and the small number

of observations in some categories, we cannot infer too much nor rely on statistical tests of difference. Yet, at first sight, average compensations in free arrangements seem lower than in rental contracts, i.e. as sharecropping and fixed rent together, with maximum values of repayment also lower in free arrangements but a distribution skewed in zero values, i.e. in arrangement where there is no compensation at all. If we decompose the monetary value of repayment in all the different types of arrangements, it appears that sharecropping and free arrangements with explicit payments involve fairly equivalent amounts of money. This raises the following question: why do respondents refer to some arrangement as “*haay chay fee*”, i.e. free arrangements, and to other as sharecropping ? A possible interpretation is that free arrangements with explicit payment actually are sharecropping contracts disguised as ‘free arrangement’, to cope with issues of legitimacy, traditional institutions, and social norms. We finally cannot conclude to continuum in the level of prices from free arrangement with no payment to fixed-rent: fixed-rent are set at lower prices than sharecropping or free arrangement with explicit payments.

Figure 1 summarizes the different categories of land arrangements.



(c) The Relationship between the parties of the transaction

Table 3: Pre-existing relationship between the parties, per type of land arrangement (in percentage)

	Parent-child	Sibling	Distant relat.	Outsider	N	Total
Free	42.70	52.81	3.37	0	89	100
Free arrang. implicit/gift	32.95	52.33	13.18	1.55	258	100
Free arrang. explicit/payment	18.37	38.78	32.65	10.20	49	100
Sharecropping	5.56	61.11	16.67	16.67	36	100
Fixed rent	21.43	25	14.29	39.29	28	100
All free arrangement	33.25	50.90	13.55	2.03	396	100
All rental*	13.10	39.29	11.90	20.4	64	100
All	30.43	50	13.70	5.65	460	100

*Rental : sharecropping + fixed-rent

Table 5.3. shows the type of relationship between landlords and tenant in each type of land

arrangement. Relationships are disaggregated in four categories, i.e. parent-child, sibling, more distant relatives - “*Yaadt Phi Nong*” or further - and outsiders defined as actors with no pre-existing relationship nor any relationship expected in the future¹⁴. 80 per cent of all arrangements are made among parent/child and siblings. More distant relatives such as uncles and aunts are found less involved in land transactions than the anthropological literature and qualitative evidences could have suggested. Finally, outsiders are involved in just above 5 per cent of all from land arrangements, and mainly concentrated in fixed-rent contracts were they are involved in alsmot 40 per cent of contracts. Fixed-rent contracts therefore stand out from other arrangements with a higher degree of impersonality. We also note that the prevalence of parent-child transactions is decreasing progressively from purely free transactions - 42 per cent - to sharecropping - 5 per cent; but notably involves 21 per cent of fixed rent contracts.

Table 5.4 displays the average value of compensations -in Thai Baht - per type of pre-existing relationship. We observe a progressive increase in the value of repayment - or rental price - as the ties between the two parties loosen. The compensation is lowest when the transaction takes place between parent and child, and highest when it is set with an outsider.

Table 4: Amount of compensation (in THB equivalent) and relationship between parties

	Mean	Standard dev.	Min	Max	N
Parent–child	333.5	615.3	0	3520	140
Siblings	447.7	723.8	0	5000	230
Relatives	668.8	661.4	0	1760	63
Outsiders	1020.3	633.2	17.6	2500	26
All	474.6	697.1	0	5000	460

We derive a few conclusions from these preliminary statistics. First, free arrangements are not necessarily free. Secondly, some so-called ‘free arrangements’ are set with characteristics quite similar to sharecropping, i.e. with a binding requirement of repayment in the form of a share of the output, at a rental price which does not differ significantly from sharecropping: we call these arrangements disguised forms of sharecropping, or ‘disguised rental’, and suggest a relation to social norms or legitimacy issues. Finally, the amount of repayment - or rental price - does not fully depend on the reported categories of arrangements or their specific conditions, and is better predicted by the nature of the relationship between the parties. The more personal the exchange, the less an arrangement is likely to be free; the more impersonal, the highest the price is likely

¹⁴Land arrangements between neighbours were scarcely observed in our data.

to be. There are different possible interpretations to this result: first, our payment data ignore long-term repayment forms or dormant claims on tenants. Once these taken into account and converted into monetary equivalents, it is possible that repayment values would become similar along all categories of arrangement and types of relationship. Secondly, personal relationships imply complex sets of motivation and rules, which may deviate from impersonal market rationales.

5 Choosing a type of arrangement

(a) Empirical approach

We now analyse the profiles of the households and plots involved in the five types of land arrangements identified in the previous section, and investigate whether the classification is relevant for understanding the economic rationales in the choice of land arrangements. In particular, we use the econometric analysis to test whether free arrangements with explicit payment deserve to be considered: 1. as a category of its own, 2. as similar to other free arrangements with implicit or gift/giving compensation systems, 3. or as a hidden form of sharecropping.

Empirically, we estimate a model of decision between five alternatives of land arrangements : free arrangements with no repayment; free arrangements with implicit compensation; free arrangement with explicit repayment; sharecropping; and fixed-rent. The decision actually follows a nested structure where the five different land arrangements can be classified as either “*haay chay fee*” - free - or “*haay chaao*” - rental.

We therefore test a serie of model: first, a simple binary logit, which estimates whether the arrangement is “*haay chay fee*” or “*haay chao*”. Given our queries on the nature of the ‘free with explicit payment’ category, we look whether results differ when it is included as “*haay chay fee*”, compared to when it is included in the rental category, i.e. considered as a disguised form of rental.

Secondly, we estimate the decision between the five different land arrangement with a multinomial logit. The estimation of choice probabilities in a multinomial logit may nonetheless be biased by the Independence of Irrelevant Alternatives (IIA) assumption, according to which the ratio of probabilities of choosing any two alternatives from the choice set is independent of the attributes or the availability of a third alternative (Cameron and Trivadi, 2010). As a consequence, and given the potentially nested structure of the decision, we finally estimate and compare two nested logits, as described in figure 2 and 3. In the first decision tree (figure 2), free arrangements with explicit compensation are consired as “*haay chay fee*”, i.e. free. In the second decision tree, we estimate free arrangements with explicit payment as “*haay chaao*”, i.e. rental. In the nested model, we consider two alternative-specific variables: an indicator of the more or less monetary nature of repayment, based on the type of repayment, and the average relative return that can be expected by landlords when choosing an arrangement, measured as the average amount of repayment in an

alternative relative to households' income. Nested model are estimated using Stata 11, following the procedure described in Cameron and Trivadi (2010).

Figure 2: Decision tree with free arrangement with explicit repayment as *haay chay fee* - free

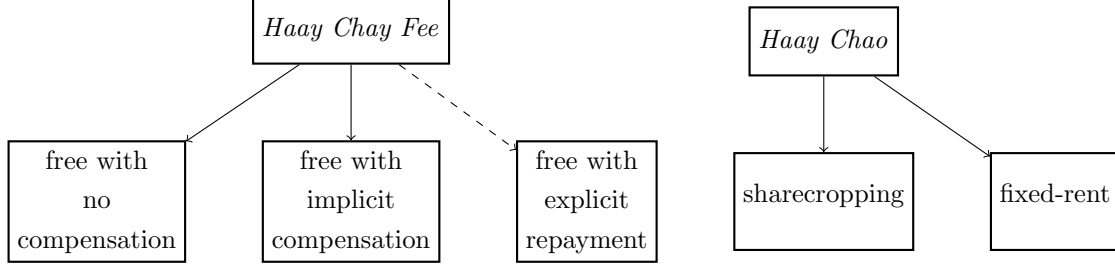
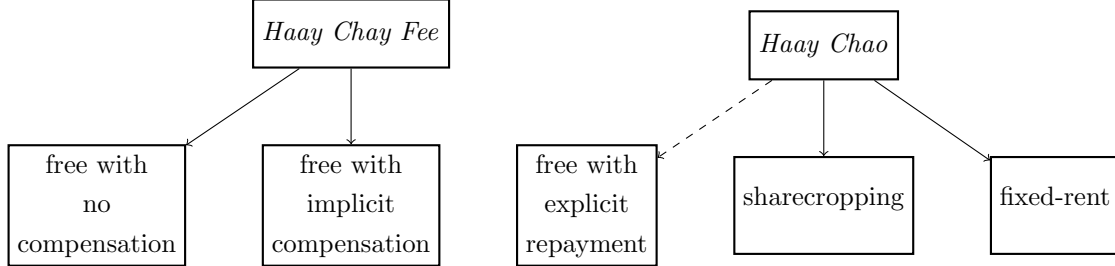


Figure 3: Decision tree with free arrangement with explicit repayment as *haay chao*- rental



Our explanatory variables - described in table 5 - reflect the main findings from the literature on land arrangements, land contracts, and their economic motivations. We look at migrant landholders' monthly income¹⁵, whether they own a house, the level of education measured as the total number of schooling years, household size, age and gender of household head. We look at the wealth differential between tenant and landlord with a dummy equal to one if the tenant is declared richer than the landlord. We control for land security and the nature of property right: we look whether the land is held with a full formal property title, i.e. called "*chanot*" in Thailand, and whether the land is registered under the landholder's own name - and not under the name of the previous holder. We also add a dummy equal to one for highland and 0 for ricefields. We control for migration characteristics: duration since first migration decision, average number of visits to the home village in a year, and whether the migrant landholder ever send money home, i.e. remittances. We also control whether the province where the land is located is considered as especially poor by local authorities. Finally, we add some variables on insurance and risk-sharing issues, which have been shown to matter in land arrangements (for instance, Braverman and Stiglitz, 1982): whether the household has had to reduce consumption following a shock in the last five years, whether they give a strong value to the safety net provided by land¹⁶, and whether

¹⁵In our data, income appear more reliable than consumption which show very little variability.

¹⁶Respondents were asked whether they agreed with the sentence: "Households from the Northeast who now

they are considered risk adverse. In the questionnaire, to measure risk aversion, households were presented with the following hypothetical situation : ‘*Imagine that you have 60 000 baht¹⁷. This money has to be kept in a bank and will be made available to you only in ten years. During those ten years, you have only two choices to make about this money.*

1st choice : you leave the 60 000 baht in an secured account. You will receive no interest rates, and in ten years, you will receive the exact sum of 60 000 baht, no more and no less.

2nd choice : you can play in the bank a win/lose game, with one chance on two (50/50) to win or lose. If you win, in ten years you will have tripled your original 60 000 baht and will therefore receive the sum of 180 000 baht. But if you lose, you will lose 50 000 baht and in ten years you will receive only 10 000.”

Migrant households who chose the 1st choice are classified as risk-adverse, the other as more tolerant to risk. Of course this is a very rough proxy, but at least it offers a basic approximation of households’ risk preferences.

live in Bangkok should always keep land because land is a safety if some problems were to happen to them”. We consider landholders responding that they strongly agree with this sentence as giving a strong value to the land safety net.

¹⁷60 000 baht is equivalent to around 1500 euros.

Table 5: Explanatory variable: summary statistics

	Type	Mean	Min	Max	N
Tenant: richer	(0;1)	0.26	0	1	460
Income/month	THB	2719.8	997	360000	460
Own a house	(0;1)	0.15	0	1	460
Schooling	nb of years	11.38	0	20	460
Household size	nb of persons	3.67	0	13	460
Age of household head	years	43.02	21	71	460
Household head - female	(0;1)	0.09	0	1	460
Full land title	(0;1)	0.91	0	1	459
Title in the holder's name	(0;1)	0.44	0	1	458
Highland	(0;1)	0.25	0	1	459
Duration of migration	years	16.60	1	50	460
Home visits	visits per year	1.45	0	2	460
Remittances	(0;1)	0.60	0	1	460
Poor province	(0;1)	0.3"	0	1	457
Risk lover	(0;1)	0.17	0	1	460
Safety net value of land	(0;1)	0.89	0	1	460
Shock	(0;1)	0.62	0	1	460

(b) Results

Free arrangement or rental : results from the binary logit

Table 6 presents the results from the binary logit estimation of the rental vs. free arrangement decision, which corresponds to the first level of the decision tree described in figure 2 and 3. In the first specification - dependent variable $Rental_{i,p}$ - we consider rental as the addition of sharecropping and fixed rent. In the second specification - dependent variable $Rental_{i,p}^{BIS}$ - we consider rental as the addition of sharecropping, fixed-rent, and free arrangement with explicit repayment: we therefore consider arrangements with explicit repayment as a case of disguised rental. In both specifications, owning a house, holding a full property title on land - a 'chanot' - the duration of migration, or land located in a poor province, all decrease the probability of rental. On the other hand, the age of the household head and the number of visits to the home village in one year increase the probability of rental. In other words, and to account for potential endogeneity in the model which limits the interpretation of results as causal relationships: compared to free arrangements, rentals involve older households who left their land more recently and visit their

village more frequently, but rarely own a house or hold a full property title on land, and come from richer provinces. The negative sign for the ‘formal land title’ variable is quite surprising and runs against the classic proposition that land rights formalization encourages land markets. It nonetheless confirms results from Thailand and Vietnam, which finds that plots sold in land markets are less frequently titled than others (Promsopha, 2013, 2015).

There are noticeable differences between the two specifications. When we keep a strict definition of rental and consider free arrangements with explicit repayment as just a specific form of ‘*haay chay fee*’ (specification 1), we note that households choosing rental contracts over free transactions are less risk-averse, and value significantly less the safety net value of land (the variable ‘safety net value of land’ is significant only in specification 1.). This result is interesting in light of the land contract and insurance literature (Braverman and Stiglitz, 1982; Akerberg and Botticini, 2000; Otsuka et al., 1992; Aggarwal, 2007): if risk-sharing in sharecropping contracts have theoretically been highlighted, empirical evidence are mixed. Our result suggests that understanding the specific terms of contracts and considering carefully the frontier between sharecropping and some form of free land arrangements is important.

A tenant richer than his landlord is also more frequent in rental arrangements, but only in specification 2, when we consider free explicit arrangements as rental. This situation may somehow be compared to reversed tenancy, already described by Amblard and Colin (2009) for the case of Romania.

Table 6: Rental vs loan - Logit estimation

	$Rental_{i,p}$	$Rental_{i,p}^{BIS}$
	(1)	(2)
Tenant: richer	-0.008	-0.485*
Income/month	0.00	0.00
Own a house	-1.281***	-0.799**
Schooling	0.030	-0.019
Household size	0.056	-0.11
Age of household head	0.054***	0.066***
Household head - female	0.574	0.282
Full land title	-1.041**	-0.664*
Title in the holder's name	0.244	0.310
Highland	0.437	0.283
Duration of migration	-0.433**	-0.52***
Home visits	0.494*	0.575***
Remittances	0.017	-0.300
Poor province	-0.60*	-0.564**
Risk lover	0.746**	-0.615**
Safety net value of land	-0.843*	-0.143
Shock	0.454	0.201
cons	-4.122***	-3.269***
Pseudo R2	0.179	0.144
N	455	455

Notes: Significance levels: * 0.10 ** 0.05 *** 0.01

Result from the multinomial and nested logit estimations

Table 7 presents the results from the multinomial estimation, Table 8 results from the nested logit estimation of the decision tree illustrated in Figure 2, and Table 9 the nested logit estimation of the decision tree illustrated in Figure 3. In all three tables, the base outcome is the free with explicit repayment category. Before looking at the results in details, we note that parameter estimates are very sensitive to model specification, and vary significantly both accross the multinomial and nested logit, and with nests specifications. We find two explanations: first, some categories, and especially sharecropping and fixed-rent, have a small number of cases compared to the number of estimators, creating instability in the results. Secondly, alternatives in the multinomial model may not be perfectly independent - the model will therefore not comply with the assumption

of irrelevance of independent alternative (IIA) necessary to obtain consistant estimators in a multinomial logit (Hensher et al., 2005) - explaining the important differences observed between the multinomial and nested logit - and despite the fact that in the nested logits the likelihood ratio test that all dissimilarity parameters be equal to one does not conclude to a significant superiority of the nested logit over more classic specifications (Table 8 and 9). As a consequence, and to avoid non-robust conclusions, we interpret coefficient estimates only when they appear significant both in the multinomial logit and in at least one nested logit specification.

Table 7: Multinomial logit estimation - results reported in relative risk ratio

<i>Base outcome : Free with explicit repayment</i>				
	free no compensation	free implicit compensation	sharecropping	fixed rent
Tenant: richer	2.19	2.35*	1.80	2.43
Income/month	0.99**	0.99*	0.99	0.99
Own a house	3.13*	0.94	7.99***	2.83
Schooling	1.03	1.06*	1.02	1.15**
Household size	1.09	1.07	1.17	1.07
Age of household head	0.93**	0.93***	0.98	1.01
Household head - female	2.59	1.03	1.58	4.57*
Full land title	0.96	1.46	0.29*	0.90
Title in the holder's name	0.48*	0.85	1.24	0.71
Highland	2.96**	0.80	1.27	3.02*
Duration of migration	0.99	1.06***	1.00	0.96
Home visits	0.49**	0.65	1.01	1.11
Remittances	1.50	1.39	2.46*	0.62
Poor province	1.48	1.57	1.03	0.52
Risk lover	1.09	0.85	2.3	1.58
Safety net value of land	0.15**	0.40	0.13**	0.14**
Shock	1.26	0.90	2.18	1.02
Pseudo R2=0.16				
N=455				

*Notes: Significance levels: * 0.10 ** 0.05 *** 0.01*

Table 8: Nested logit estimation with free-explicit repayment nested as free arrangements (figure 2) - coefficient

	Lower nest, base = free with explicit repayment:			
	Free no compensation	Free implicit compensation	sharecropping	fixed rent
Tenant: richer	0.75	0.86	0.55	0.82
Income/month	-0.00	-0.00	-0.00	-0.00
Own a house	1.02	-0.11	1.99***	1.15*
Schooling	0.03	0.06	0.03	0.12*
Household size	0.12	0.10	0.13	0.11
Age of household head	-0.06	-0.05*	-0.00	0.02
Household head - female	0.81	-0.05	0.67	1.14
Full land title	0.10	0.72	-0.99	-0.22
Title in the holder's name	-0.67	-0.14	0.18	-0.22
Highland	1.02*	-0.20	0.45	0.85
Duration of migration	-0.01	0.05*	-0.01	-0.02
Home visits	-0.61*	-0.31	0.08	0.14
Remittances	0.38	0.36	0.65	-0.22
Poor province	0.35	0.43	-0.17	-0.48
Risk lover	0.11	-0.12	0.81	0.49
Safety net value of land	-1.38*	-0.43	-1.73**	-1.62**
Shock	0.24	-0.06	0.59	0.22
Upper nest: Alternative specific variables	- YES -			
Dissimilarity parameters:				
Free	0.92			
Rental	0.54			
LR test for IIA: chi2	0.51			
<i>Prob > chi2</i>	0.7731			
Number of observation	2275			
Number of case	455			

Notes: Significance levels: * 0.10 ** 0.05 *** 0.01

Table 9: Nested logit estimation with free-explicit repayment nested as rental (figure 3) - coefficient

	Lower nest, base = free with explicit repayment:			
	Free no	Free implicit	sharecropping	fixed rent
	compensation	compensation		
Tenant: richer	0.56	0.66*	0.18	0.42
Income/month	-0.00	-0.00	-0.00	-0.00
Own a house	0.40	-0.77	0.91	0.30
Schooling	0.02	0.05*	0.01	0.07
Household size	0.09	0.07	0.07	0.06
Age of household head	-0.06***	-0.06***	-0.01	0.01
Household head - female	0.47	-0.42	0.19	0.48
Full land title	0.40	0.96**	-0.47	0.14
Title in the holder's name	-0.73*	-0.14	0.13	-0.17
Highland	0.88	-0.43	0.11	0.44
Duration of migration	-0.00	0.07***	-0.00	-0.01
Home visits	-0.65**	-0.34*	0.08	0.12
Remittances	0.35	0.30	0.37	-0.19
Poor province	0.41	0.49*	-0.06	-0.29
Risk lover	-0.07	-0.32	0.41	0.20
Safety net value of land	-0.83	0.12	-0.75	-0.61
Shock	0.15	-0.18	0.37	0.04
Upper nest: Alternative specific variables	- YES -			
Dissimilarity parameters:				
Free	1.00			
Rental	0.38			
LR test for IIA: chi2	1.76			
<i>Prob > chi2</i>	0.41			
Number of observation	2275			
Number of case	455			

Notes: Significance levels: * 0.10 ** 0.05 *** 0.01

Compared to free arrangements with explicit repayment, arrangements with no compensation at all involve younger households, and highlands held under a title registered in the parents' name - or any other previous holder's name. Households involved in these arrangements with no compensation also visit their home village less frequently and give less value to the safety net function of land. Overall, and relying on qualitative interviews to make sense of the econometric results, it seems that free arrangements with no compensation involve young household holding land through uncomplete inter-vivo bequests - as suggested by the negative coefficient in the "title in landholder's name" variable in table 7 and 9. Households have been given land by their parents, but with no formal transfer of property. Interviews suggest that the transfer of property can take years to be made official, and sometimes never is. This has importance consequence for the land registry and the defecto implementation of formal property. It sometimes creates family conflicts and difficulties in mobilizing land - yet covered by a *chanot* or formal title - for land market

transactions or access to formal credit. Another interesting results is that arrangements with no compensation seem to require less supervision, especially when the tenants are the holder's parents, as suggested by the smaller number of home visits (Table 7, 8 and 9) in this type of arrangement.

In free arrangements with implicit compensation - and as before compared to arrangements with explicit payment - tenants are often richer than their landlords, households have a higher level of education, are younger and have migrated for a longer period of time.

Finally, self-acknowledged sharecroppers own their house and give less value to the land safety net. Fixed-rent arrangements also involve more house owners valueing the safety net function of land significantly less.

We note that when free arrangements with explicit repayment are considered as disguised forms of rental, i.e. nested as rental (Table 9), the wealth differential, i.e. the variable "tenant richer" - and holding one's own name on the property title, i.e. the variable "title in the holder's name", are significant; while the effect disappears when arrangements with explicit repayment are considered as belonging to the '*haay chay fee*' nest (Table 8.). On the contrary, the safety net value of land is only significant in Table 8 to differentiate arrangements with explicit repayment from arrangements with no compensation, sharecropping and fixed rent. This last observation confirms the results from the binary logit (table 6): the effect of a strong value to the land safety net is only significant if the *haay chao* vs. *haay chay fee* distinction is made based on landholders' self-reports or rather on the observation of practices and contractual terms. The effect of valueing the land safety net yet disappear as soon as we define rental vs. free arrangement on the basis of the real terms of contracts (Table 9, Figure 3), rather than on the basis of respondents self-reports (Table 8, Figure 2). A possible interpretation, based on qualitative interviews, is that when making free arrangements, households open the way to dormant claims for solidarity and risk-sharing in case of shock or need. Therefore, some of the households requiring a payment in exchange of land arrangements may find in their interest to report the transaction as free instead of rental, to comply with social norms and maintain their access to insurance - or at least try. As explained by one of our respondents during an interview: "*if you ask for money in exchange of your land, especially if it is one from your relatives, after, you may appear as someone greedy, get a bad reputation. Maybe your relation with the family will not be so good after.*". And if the relation is loosened by monetary rental transactions, risk-sharing and asking for help may be compromised thereafter, in a country where family solidarity is considered as a prime insurance mechanism (Vanwey, 2003, 2004).

6 CONCLUSION

This paper first suggests that a binary framework of land arrangements which separates rental and loan as two coherent categories with self-evident boundaries is not always relevant. The results of a thorough empirical investigation based on mixed qualitative and quantitative data shows that free arrangements are not necessarily free; and allow to identify ‘disguised rentals’, that is *de facto* rental arrangements disguised as loans, and officially referred to as ‘free loans’ by local actors.

Simple econometric estimations also show the importance of incomplete *inter-vivo* bequests in the free arrangements made by Thai rural-rurban migrants, suggesting incomplete transfers of property rights from parents to children and, despite the success of the land titling programs, potential issues for the authorities in keeping land registries up-to-date; the correlation between a smaller number of home visits and the setting of free arrangements requiring less supervision efforts, and the importance of insurance and risk-sharing factors in shaping ‘desguised rental’ arrangements. Overall, the paper sstrongly suggest the use of mixed data, thorough empirical work, and the consideration of free arrangements as a land contract in its own right, just as sharecropping and rental.

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