

DORAS - DELTA : research report n°6

**Agrarian change and the land system
in the Chao Phraya delta**

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Abbreviations, units used

ALRO: Agricultural Land Reform Office

BAAC: Bank of Agriculture and Agricultural Co-operatives

BMA: Bangkok Metropolitan Area

DLD: Department of Land Development

HYV: High Yield Varieties

NRDC: National Rural Development Council

RID: Royal Irrigation Department

rai 1 ha = 6.25 *rai*

thang 1 *thang* = 10 kg (for paddy rice in the Central Region)

baht 1 US \$ = 37 baht (current average value)

changwat Province

amphoe District

tambon Sub-district

Abstract

Land is the prime resource of agricultural production. Agrarian systems are often subject to historical land fragmentation, along with growing population pressure, and/or to a trend towards a skewed distribution of ownership (small farms are absorbed by large farms which keep growing in size). It is shown that although the Chao Phraya Delta land system has undergone several crises during the 20th century, it has by and large remained rather stable and avoided “crisis” scenarios. The report presents an extensive analysis of historical change based on secondary data and observations made by local studies. Land distribution in both farm size and tenure status, together with landlessness, are analysed along history and disaggregated at the provincial level. High discrepancies between provinces show that indiscriminating analysis based on data at the regional level or on specific areas (e.g. Rangsit) are misleading. Patterns of contractual arrangements in the rental markets are also presented in their temporal and spatial diversities and it is concluded that real rents have been declining in the last 30 years.

The overall interpretation of changes in the land system is attempted by analysing in detail how these change relate to concomitant evolutions observed in demographic parameters (fertility revolution, increase in life expectancy, migrations), agricultural change (land development, intensification, diversification), economic change (growth of non-agricultural sectors; *regression* of the land frontier; land speculation, etc), and cultural factors (patterns of inheritance, attraction of the urban way of life). The linkages between the land market (rent and purchase) and the capital and labour markets are also investigated. The evidence of far-reaching structural and macro transformations is emphasised and serves as a basis for the analysis of current dynamics and for prospectives.

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1 Introduction

In most parts of Southeast Asia, land resources have been plentiful for a long time and their value has been linked tightly to the possibility of providing the human labour necessary to extract some agricultural production from them. With the increasing commercialisation of economies in the second half of the last century, either through the pressure of Western states or through their effective presence as colonial powers, land gradually became a coveted good and a prime commodity of economic development and wealth (Cleary and Eaton, 1996). Consequently, informal or collective patterns of land ownership were, at the turn of the century, at least in denser areas with old historical settlements and agricultural development, progressively replaced by official titling: cadastres, registers and land taxes. They gave value and security to land ownership, official trading rights to productive areas and redefined the structure of society by creating new categories of farmers. Land owners (sometimes absentee, sometimes 'haciendero'), owner-tenants, full tenants or landless wage labourers, through their relative proportions, the share of the land they farm and the social and economic relations that bind them together, are obviously form the most salient feature of these transforming agrarian systems.

Separated from the quantitative basic consumption needs of families (traditional communities with collective ownership have often developed rules to allocate land in accordance with the size and need of families), land as a commodity is both transmitted through the family lineage (inheritance) and traded (including leasing and selling). This increased "commoditisation" brings about the two main threats to a given agrarian system: from an hypothetical "equilibrium point", in which all rural families have land endowments proportional to the number of their members, several process will be at work to create imbalances.

The first obvious threat is derived from population growth. For a given level of productivity allowed by a given technological level and a fixed area of farmland, natural population growth will – quite rapidly – increase population pressure on land, while farm size and *per capita* production will decline, jeopardising the economic sustainability of the farms. This is referred to commonly as a Malthusian evolution, a strong concern of Asian agrarian systems characterised by a high rate of small farms and generally high demographic growth. This demographic process is bound to be associated with a *Ricardian stagnation* scenario in which more labour is applied by unit of cultivated land but without raising the output enough so as to avoid a decline in labour productivity; accordingly, the price of food increases with the rise in

production costs. Real wages decline and land rents are on the rise, in accordance with their respective levels of scarcity.

The second threat is the way land resources are distributed among the population. Any prevailing egalitarian distribution will be challenged by several processes that tend to create disparities constantly: heterogeneities in the family structure (number of children, health status, etc), in human resources (skill, will, risk-management, etc) or in the socio-cultural structure (differentiated access to productive resources according to social and political stratification; patterns of land transmission by inheritance; heterogeneities in the land itself (lowland/upland, fertility, varied climatic risk, etc) and, therefore, on the economic return of the products it yields. Subsequently, in a dynamic process, these imbalances will tend to strengthen some farms while others will be weakened. Traditionally, subsistence economies in Southeast Asia have developed social means to control such disparities that may destroy the cohesion of the group. Needs for mutual help, labour sharing at critical times of the agricultural calendar and food redistribution in case of shortage – regardless of whether they are seen as a normative moral ideal or as a mere subsistence prerequisite - were salient features of such economies.

However, these pre-capitalist economies were seldom utopian heavens of egalitarianism. Social differentiation was not unknown but it was controlled mainly by patron-client relationships that both ensured the protection of the weakest and the legitimacy of the position of the wealthiest (Scott, 1976). This *moral economy*, however, was confronted drastically with the commercialisation of agriculture and of its means of production, as well as with the direct interest of colonial powers. Alongside the dismantling of traditional subsistence economies, increasingly contrasting holdings appear and capital excess or deficit (debts) shortly translate into the accumulation of more land in fewer hands, while the most unfortunate victims partly or totally lose their land assets. This, classically, can be termed as the *Marxian threat* of polarisation.

Most agrarian systems in Asia are, to some extent, subject to these two processes: it is worth noting that they are not incompatible (they may occur simultaneously) nor irreversible (farm consolidation may occur instead of fragmentation, while land reforms – for example – may flatten inequalities). Adjustments required to offset these threats and to ensure the sustainability of the system come under two main categories: the first one is broadly speaking a *Boserupian* process of intensification, in which land-saving innovations allow some “vertical growth” to occur. The second one is the diversification of the economy, with a transfer of the excess labour force from the agricultural sectors to non-agricultural sectors.

In general terms, the structure of the *land system* (*the characteristics of the access to and of the use of the land resources within a given agrarian system*) appears to be

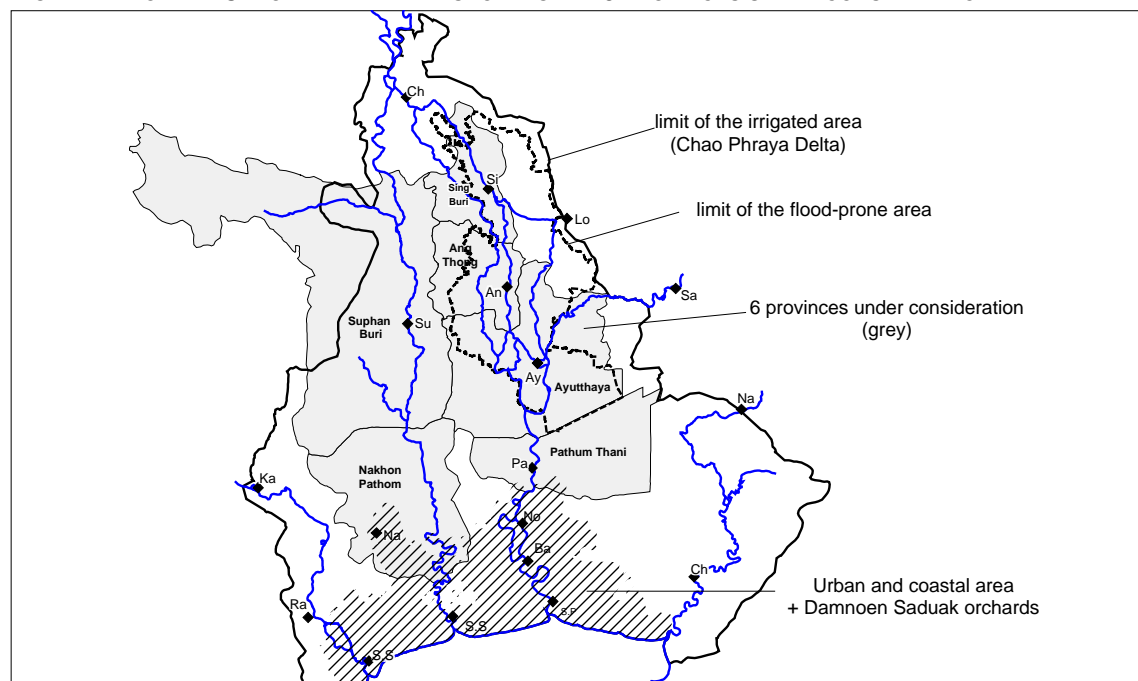
extremely complex when one considers the different factors that govern its dynamic over time. Available statistical data are in general insufficient to capture this complexity and to single out ongoing processes. If recent data happen to be more comprehensive, older data are often too limited to allow temporal comparisons. More generally, the number of possible combinations between the set of farms (holdings) of a given region and the set of cultivated plots – in numeric and tenurial terms, and also regarding the social arrangements attached to transactions - are extremely high and their re-combination over time is governed by varied agro-ecological, physical and socio-economic factors that are also subject to change. There is, currently, no available general theoretical model giving a deterministic representation of these interactions.

The case of Thailand, most specifically its Central Region and the 1850-1930 period, has aroused considerable scholarly interest and work. The circumstances of its historical transformations have been analysed by several classical studies to which the reader may refer (see, in particular, Ingram, 1971; Manarangsang, 1989; Feeny, 1982; Johnston, 1975; Ishi, 1975). The present study provides an analysis of the transformations of the land system in the Chao Phraya Delta, the rice bowl of Thailand. It endeavours to link a set of quantitative data (namely the agricultural censuses of 1950, 1963, 1978, and 1993 complemented with data from population censuses, various surveys and investigations) with a qualitative representation of the main ongoing processes derived from a variety of sources and from ongoing research on the agrarian dynamics in the Chao Phraya Delta (Kasetsart University and ORSTOM, 1996). First, a description of the main dynamics relevant to our concern will be given and re-assembled on a flow-chart. Second, an analysis of the secondary data will be carried out within this qualitative framework, before giving way to a tentative overall interpretation of the evolutions of the land system.

Many studies on rural Thailand are based on aggregated data at the regional level. However, the high heterogeneity of agro-ecological and development conditions does not allow interpretation at that level. Even at the provincial level, it is often dangerous to draw conclusions: in the Central Region, provinces such as Lop Buri, Saraburi or Ratchaburi encompass a wide variety of agricultural conditions, ranging from forests, upland cultivation, to irrigated and lowland flood-prone conditions. The density of population, the rental and land markets, the level of land titling, and integration into the market are other important factors with significant spatial heterogeneity. Provinces with recent expansion into the uplands produce statistics that are an average of very different situations (rice-based long-settled core areas; expanding field crops in uplands, etc) and offer little support to disentangle such an intricate process. In this light, many analyses done on the Central Plain appear to be marred by the inconsistency of the spatial units used and/or by the undue generalisation of site-specific observations.

In an attempt to avoid such misleading situations, this study focuses on the agrarian change of the core of the (irrigated) Chao Phraya Delta, considering only six provinces entirely included in that region; an exception has been made for Suphan Buri Province, which has almost half of its land outside the irrigated delta and will serve as a point of comparison for other provinces, namely Sing Buri, Ang Thong, Ayutthaya, Pathum Thani and Nakhon Pathom (Fig. 1). Other provinces exclusive to the delta have been excluded, either because they are too close to the capital or because they are located in coastal areas, with limited and/or specific agricultural activities (aquaculture, orchards). When possible, we will also resort to data given at the district (*amphoe*) and even sub-district (*tambon*) level, in order to zero in better on the delta itself.

FIG. 1: MAP OF THE CHAO PHRAYA DELTA SHOWING THE 6 PROVINCES UNDER CONSIDERATION



From north to south: **Ch**: Chai Nat; **Si**: Sing Buri; **Lo**: Lop Buri; **An**: Ang Thong; **Sa**: Saraburi; **Su**: Suphan Buri; **Ay**: Ayutthaya; **Na**: Nakhon Nayok; **Pa**: Pathum Thani; **No**: Nonthaburi; **Ka**: Kanchanaburi; **Na**: Nakhon Pathom; **Ba**: Bangkok; **Ch**: Chachoengsao; **Ra**: Ratchaburi; **S.P.**: Samut Prakan; **S.S.**: Samut Sakorn; **S.S.**: Samut Songkram.

The six selected provinces bear contrasting features regarding population, land use and water control, which will entail different interpretations of the land system evolutions (Kasetsart and ORSTOM, 1996). Pathum Thani has high historical levels of tenancy due to the purchase of land by the nobility at the end of last century and it is influenced by Bangkok's expansion. Nakhon Pathom, with a significant rate of urbanisation too, shows a sustained process of diversification away from rice and sugarcane. Suphan Buri is a traditional rice growing province with good water control, but has part of its area in the uplands. Ayutthaya, Ang Thong and Sing Buri (most especially the former) have a large share of their areas cropped with traditional rice

varieties and low crop intensity (this “*flood-prone area*”, as it will be called hereafter, is indicated on the map in thick dotted lines¹). In these areas, off-farm activities are common and the agricultural population is ageing markedly.

Most scholars have concentrated their attention on the rate of tenancy, the average farm size, or indebtedness and have given contrasting interpretations of these figures. A number of pessimists have often extrapolated evidence concerning some part of the region (notably Rangsit² or Ayutthaya) or some particular periods of history. Although sound and well-founded, this evidence may appear as partial within a more comprehensive spatial and temporal scope.

The situation of settlers, mostly indebted tenants or wage labourers, in Rangsit at the beginning of the century (notably during the 1905-1912 depression) is undoubtedly one of sheer precariousness and is documented widely (Johnston, 1975; Nartsupha and Prasartert, 1978; Thaveesilp, 1978). This sub-region, however, makes up a very small part of the delta (7-8%) and even if we adjoin to it several other large tracts of land seized by the nobility through its privileges, it only makes up the first ring of land fields around the capital: in fact, historical documentation about Rangsit is abundant because of its proximity to Bangkok, because of its peculiar pattern of land development and, chiefly, because the huge interests of the Thai nobility and officials in the area were threatened by all kinds of disputes and disorders. Focus on Rangsit-centred evidence may lead to a distorted vision of the overall situation in the delta (the “*Rangsit bias*”).

Similarly, another geographic bias might be substantiated by a concentration of studies relative to the flood-prone area of Ayutthaya Province, which rightly typify how the fierce ecological limitations of the area impact on the livelihoods of farmers. The proximity of Bangkok also sharpens its features of out-migration, pluri-activity and land speculation by the urban capitalist strata.

It is also noteworthy that most of the “alarming” points of view were expressed in crisis periods in which the possible consequences of ongoing processes really deserved to be stressed and cautioned against. It will be shown that the delta has undergone three main crises during the century. The first depression was felt during the 1905-12 period, the second was consecutive to the 1929 World Depression and the third can be conveniently situated around 1970: at that time, several reports warned that “population pressure and inheritance practices are constituting the primary pressures upon farmers to engage in tenancy; (...) the percentage of owner-

¹ The flood-prone area mostly grows a single crop of deep-water or floating rice per year. Its hydrological regime is totally different from that of the rest of the delta. A detailed study of this area can be found in Molle et al. (1999).

² The Rangsit area was the first large scale development scheme: most of it is located within Pathum Thani Province (see Fig. 1)

tenants and tenants among all farmers will increase tremendously in the future” (Wagstaff, 1970). This concern is echoed by Ramsson (1977) who states that “as the remaining frontiers in farm land begin to close, it can be expected that farm land tenancy will become more widespread”. Piker (1975) opportunely raises concern about land speculation on the part of the urban strata and sees the “ownership of rice lands passing increasingly and irreversibly out of the local rural community”. Tomosugi (1969) notes that “nearly 50% of paddy fields are now tenant cultivated” and that the “trend is still continuing at present”. Resanond (1979) admits that “if this trend [3% population growth] continues, and it is very likely to do so, (...) how to keep all of them [farmers] in agriculture is *another big problem*”... Chiengkul (1983a) and Douglass (1984) see this period as the outcome of a deleterious process of capitalist penetration in the Central Plain.

A part of the present study will be devoted to assessing why, how and to what extent the ensuing decades have conformed or not to these expectations.

This study attempts a wider systematic approach to the land system in the Central Plain by broadening the scope of investigation:

- timewise, it includes most recent and detailed statistics from the 1993 agricultural census and attempts to establish a long-term series of relevant parameters; it tries to periodize the evolution of the agrarian system and to show that it is far from uniform;
- spacewise, it disaggregates the Chao Phraya Delta into provinces and focuses on those (five) with some degree of homogeneity regarding the history of settlement, population and agricultural patterns; whenever possible, it also provides data at a lower level (*amphoe, tambon*) in order to better typify processes at work in different parts of the delta;
- scopewise, the study gives due attention to demographic variables and evolutions, to cultural patterns of inheritance and to linkages between factor markets. Central to the investigation is also the consideration of agricultural productivity along time (which impedes one to consider land endowment as a fixed given set of tokens), and the composite nature of the household economy.

2 The main ongoing processes in the agrarian system

An overall description of some significant trends in the delta is attempted here, with a focus on the most meaningful ones with regard to the question of the land system. This model is qualitative: in fact, depending on the magnitude of each process, the dynamics resulting from their combination and interactions may differ totally. In addition, several contrasting dynamics may develop simultaneously in the region or even in the same province; this heterogeneity very seldom corresponds to administrative limits and, therefore, cannot be satisfactorily captured through the use of statistics. Qualitative and quantitative considerations will alternate, aiming at converging towards the most plausible interpretation.

2.1 A declining agricultural sector and a net loss of agricultural land

The delta can be conveniently and schematically pictured as a dipole: on one side is the Bangkok Metropolitan Area (BMA), with some extensions towards Chon Buri or Samut Prakan, where the bulk of the growth of the secondary and tertiary activities is concentrated; on the other side is the irrigated delta, the main rice bowl of Thailand. The interactions within this dipole are varied and numerous (see later sections for more discussion) but two trends emerge as of paramount importance and magnitude: the net transfer of land and labour force from the agricultural domain to the urban one.

Agricultural land in the delta has been declining since the mid-1970s. This *regression of the land frontier* is very significant, most especially around Bangkok and, with regard to the provinces included in our sample, Pathum Thani and Nakhon Pathom: these last two provinces lost around 1.4% of their agricultural land every year in the 1963 -1993 period (Table 1). While Ang Thong and Sing Buri have limited their losses to 15 and 18% of the total land farmed in 1963, Ayutthaya has lost 24%. Suphan Buri stands out as an exception, with an increase of 9% due to the opening of new uplands to the west of the province.

This reduction is due principally to urban and industrial growth and to the transformation of agricultural land into real estate, sand pits, golf courses, Sunday-gardens, roads, etc. Speculation is also responsible for some fallow land, especially along the main roads and near urban centres. Not considering Suphan Buri, the remaining provinces undergo an overall loss of 27% of their agricultural land: this is likely to have drastic repercussions on the man/land ratio and on land tenure.

The table also shows data for 1950. An increase of 14% is still recorded between 1950 and 1963. This implies residual land, brought under cultivation, part of which is attributable to the implementation of the Chao Phraya Irrigation Scheme.

TABLE 1: TOTAL FARM AREA (RAI), BY CENSUS.

	1950	1963	1978	1993	1993/1963	(±)% year
Ayutthaya	1,100,311	1,382,460	1,269,611	1,045,584	0.76	-0.93
Ang Thong	444,214	494,659	503,808	420,251	0.85	-0.54
Pathum Thani	796,295	830,040	750,931	554,135	0.67	-1.34
Sing Buri	389,754	440,187	371,604	358,908	0.82	-0.68
Suphan Buri	915,553	1,852,298	1,946,310	2,012,113	1.09	0.28
Nakhon Pathom	926,596	1,035,579	812,181	672,996	0.65	-1.43
Total	4,572,723	6,035,223	5,654,445	5,063,987	0.84	-0.58
Total - Suphan	3,657,170	4,182,925	3,708,135	3,051,874	0.73	-1.05

Note; 6.25 rai = 1 ha

2.2 Demographic changes

The rural part of the Chao Phraya Delta underwent dramatic demographic changes during the second half of the present century. These included massive population loss by migration, an overall decline in fertility and a consecutive ageing of farmers. Demographic changes are far-reaching elements of our discussion and are highlighted in this section.

2.2.1 A net positive out-migration flow

Immigration has played an important role to offset the (too) low population density in the country during the 1850-1940 period. It contributed, with hired labour from the Northeast region around the turn of the century until 1930, manpower for the clearing, cultivation and land development of the delta. In the meantime, Chinese immigration provided most of the labour force for port activities, mills, manufacturers and commerce (Johnston, 1975; Ouyyanont, 1997; Phongpaichit and Baker, 1997).

Further to a gradual closure of the land frontier in the delta and corresponding growing demographic pressure, the post-war recession in rice production together with a stagnating low productivity have triggered out-migration: a first opportunity to relieve the population pressure was given by the development of upland agriculture. From 1952-58, the stagnation of rice (rice premium, low market prices) and population growth influenced the expansion of upland field crops, pulled by better transportation facilities, malaria control and new markets for export. During the

1960s, the volume of agricultural production increased at a rapid 5.5% per annum (World Bank, 1982).

In their studies on migration during the five years preceding the census of 1960, Prachuabmoh and Tirasawat (1974) found that among the top eight provinces with the highest rate of net loss by migration were six provinces of the Central Plain, with losses ranging between 3.2 and 4.2% of the population: Sing Buri, Chachoengsao, Chai Nat, Samut Songkhram, Ang Thong, and Ayutthaya. Such rates, equivalent to approximately 0.8% per year, compared with a natural growth of 3%, indicate that these provinces suffered a significant loss of population. Migration, in addition, related to a population with a dependency ratio³ of only 0.24, much lower than that of the rural population (1.3 in 1960), and had, therefore, much more impact on the labour force⁴. An examination of population movements inside and between the different regions, during the same period, shows that the largest population movements were directed from the rural lower Central Plain to the Bangkok-Thonburi area, to the upper Central Plain (to areas such as the Kamphaeng Phet settlement area⁵) and to the northern region. "The net outflow from the Central Plain, which continued well into the 1960s, partly removed the population pressure in the land-scarce rice sector while providing manpower resources needed for the development of upland crop cultivation" (Ngo, 1980).

The 1970 census provides similar data on migration for the 1965-1970 period. It shows that the rural Central Plain underwent a net loss and that intra-regional movements were directed towards the west and the east of the region (expansion of field crops in upland forest areas), (Adulavidhaya and Onchan, 1985, Tirasawat, 1985). The move is so significant that the *absolute agricultural population in the delta decreased between 1960 and 1970*.

From 1975-1980, similar data (NSO, Population Census 1980) show that out-migration from provinces of the *rural Central Plain*⁶ (Bangkok Metropolis and its vicinity⁷ excluded) significantly decreased⁸, amounting to 262,000 people, or 4.72%

³ (population under 15 and over 55 years old/population between 15 and 55 years old).

⁴ This means that around 80% of the migrating population is potentially active, against 50% (nowadays) for the fixed population. The respective growth rates for the 15-55 year old strata are therefore approximately 0.64% and 1.5% for the two populations.

⁵ Kamphaeng Phet Province doubled its population between 1960 and 1970.

⁶ Chai Nat, Sing Buri, Ang Thong, Lop Buri, Saraburi, Suphan Buri, Kanchanaburi, Nakhon Pathom, Samut Songkram, Chachoengsao, Chonburi, Nakhon Nayok, Ayutthaya.

⁷ Bangkok vicinity is formed by the provinces of Nonthaburi, Pathum Thani, Samut Sakhon and Samut Prakan. The distinction is essential to evidence migration flows. Conventional statistics by region only consider the Central Region and Bangkok and are useless for this purpose.

⁸ Out-migration rates from provinces along the Chao Phraya River were in the 6-7% bracket in the preceding decade.

of the total population over five years old. Of these migrants, 47% moved to Bangkok, 14% to its vicinity and the rest (39%) to outer provinces (predominantly to the north: 46% of the latter). These outflows were compensated partly by 171,000 in-migrants (3.08% of the population over five years old), a third of them from Bangkok and its vicinity and two-thirds from outer provinces (with attractive *changwats* such as Saraburi, Kanchanaburi, Chon Buri), mostly because of industrialisation⁹. The total net loss of the rural Central Plain totals 91,000 persons (1.64%: Table 3), to which should be added an unknown part of the movements between provinces of the rural Central Plain (0.56%) which accounts for the migration towards uplands (Kanchanaburi, Lop Buri, Saraburi). Moreover, if we consider the 0-5 year old strata (11% of the total population in 1980), the rate of 1.64% must be corrected to 1.46%.

It should be noted that the net migration gains of Bangkok and its vicinity are 4.8% and 7.7% respectively, indicating that the highest growth now occurs in the vicinity.

TABLE 2: MIGRATION FLOWS BETWEEN THE REGIONS CONSIDERED 1975-80.

...To From...	Bangkok	Vicinity	Rural Central Plain	Outer <i>changwats</i>	Total outflow from
Bangkok	197182	70603	44559	74042	189204
Vicinity	33761	7167	12895	8190	54846
Central Plain (rural)	123287	36014	101600	102404	261706
Outer <i>changwats</i>	234753	45932	113235	813293	393921
Total inflow In	391802	152549	170689	184637	899677

TABLE 3: NET MIGRATION FLOWS BETWEEN THE REGIONS CONSIDERED 1975-80.

...To From...	Bangkok	Vicinity	Rural Central Plain	Outer <i>changwats</i>	Net outflow from
Bangkok		36841	-78728	-160711	-202598
Vicinity	-36841		-23120	-37742	-97703
Central Plain (rural)	78728	23120		-10831	91017
Outer <i>changwats</i>	160711	37742	10831		209284
Net inflow In	202598	97703	-91017	-209284	

Source: NSO data

In the early 1980s, according to Poapongsakom (1996), “the high economic growth was temporarily interrupted by a world wide recession which badly impinged upon

⁹ These provinces are quite peripheral regarding the core delta region. This means that the real loss of the delta is underestimated here.

the living standard of the rural population between 1981 and 1986, (..) forcing a large stream of rural migrants to seek temporary employment in Bangkok". Although no figures are available, this lends support to the hypothesis that net in-migration in Bangkok has increased during this period, also characterised by a dramatic slump in real rice prices.

More recently, migration in the 1985-90 period has been a key factor of agricultural evolutions (Kasetsart University and ORSTOM, 1996). Out-migration has taken 4.69% of the population out of the rural Central Plain during the 1985-90 period, a rate similar to that of the previous decade (but a significant increase in absolute terms). More than one-third of the 180,000 departures to Bangkok and its vicinity have been compensated by returns. The outflow of 144,000 persons towards other outer *changwats* has been counterbalanced by 158,000 arrivals from these same regions. On the whole, returns amount to 3.37% of the population (over five years old), a slight increase from the levels observed 10 years earlier.

In brief, the (rural) delta has lost 1.32% of its population¹⁰, a slight decrease from the 1.64% level of the 1975-80 period (but an almost equal number in absolute terms), whereas the other surrounding regions (North, Northeast, South) have been depleted by 500,000 net departures, mostly moving to both Bangkok (two thirds) and its vicinity (one third) (Table 4). Again it must be noted that the flows between provinces of the rural Central Plain are as high as its net loss (1.83%), which suggests that significant lowland-upland movements should be added to the overall loss (see net migration losses by *changwat* in Annexe 9).

TABLE 4: MIGRATION FLOWS BETWEEN THE REGIONS CONSIDERED, 1985-90.

From... ...To	Bangkok	Vicinity	Rural Central Plain	Outer <i>changwats</i>	Total outflow from
Bangkok		135,784	59,480	162,028	357,292
Vicinity	37,645	(10616)	13,991	15,882	67,518
Central Plain (rural)	128,754	48,768	(91829)	144,049	321,571
Outer <i>changwats</i>	543,760	121,488	157,577		822,825
Total inflow In	710,159	306,040	231,048	321,958	

¹⁰ Or 1.23% if we consider the additional 7% (in 1990) of the 0-5 year old strata to the total population. This calculation is an approximation because taking into account the whole population is more complex than this simple correction, in particular due to migrant children born during the five years considered.

TABLE 5: NET MIGRATION FLOWS BETWEEN THE REGIONS CONSIDERED, 1985-90.

...To	Bangkok	Vicinity	Rural Central Plain	Outer <i>changwats</i>	Net outflow from
From...					
Bangkok		98,139	-69,275	-381,732	-352,867
Vicinity	-98,139		-34,776	-105,606	-238,522
Central Plain (rural)	69,275	34776		-13,529	90,522
Outer <i>changwats</i>	381,732	105,606	13,529		500,867
Net inflow in	352,867	238,522	-90,522	-500,867	

Source: NSO data

Growth rates by decade in the whole Central Plain are now around 24%, after a decade (1970-80) at 31%. Such a rate is the combined result of the natural growth with net migration flows. The annual natural growth rate has been declining considerably in Thailand and the yearly average rate - for the whole country - was around 1.5% in 1990. If we consider the observed overall population increase between 1985 and 1990¹¹ for the *rural Central Plain*, the period is characterised by a loss of 0.3% by out-migration (around 90,000 persons) and a gain of 640,000 persons due to natural growth (overall positive balance of 550,000). Out-migration appears to be declining in relative terms, possibly in part because of the growth of job opportunities in provincial centres in the 1986-96 period.

In summary, in-migration played an important role to offset the (too) low population density in the country from 1850-1940. A post-war recession in rice production and demographic saturation of the delta, together with development of upland agriculture, boosted out-migration from the upper delta in the late 1950s and the 1960s. Despite the net out-migration loss and a declining fertility, the former appears to be of a lesser magnitude than the latter (-0.3% per annum for migration against +1.5% for natural growth in the 1985-90 period): in terms of labour force, however, this must be corrected by the fact that the dependency ratio of the migrant population is much lower than that of the total population. Real out-migration is also underestimated as migrations inside the central region are not captured.

The population of the rural data is still on the rise. Its agricultural population, however, is decreasing slowly now, while all the natural growth and net migration flow have been transferred to non-agricultural sectors. In relative terms, this translates into a drastic nose-diving of the share of the agricultural population, from 70% of the total population in 1960, to 40% in 1990 (data for the *rural delta*).

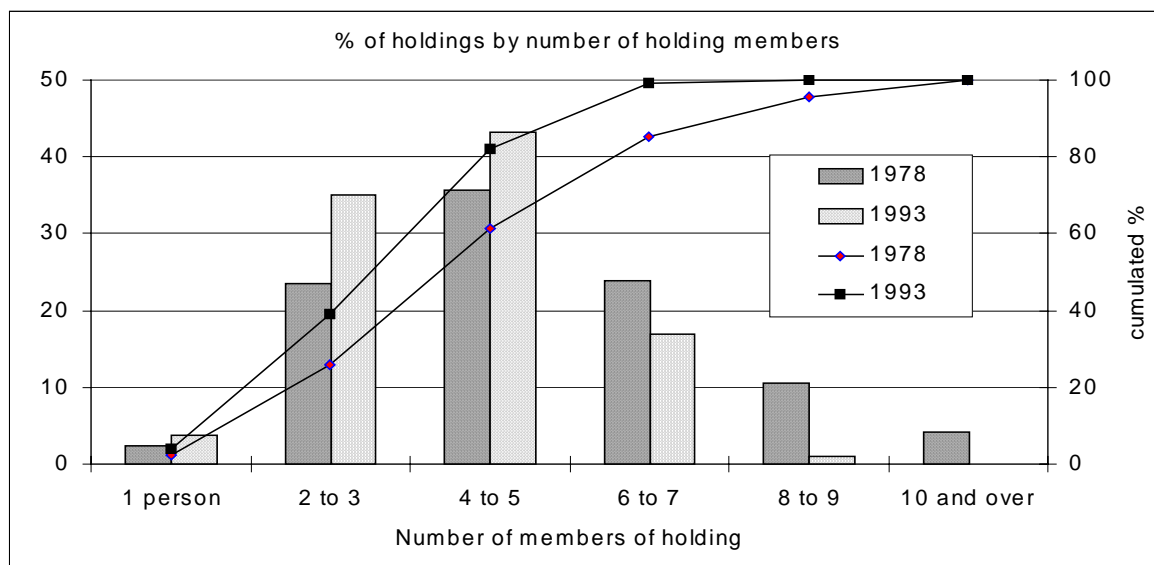
¹¹ 1.07 millions persons between 1980 and 1990, corresponding to an annual rate of 1.58% per year (*total population*), or 1.6% per annum for the 1980-85 period and 1.55% for the 1985-90 period, if we take into account the decrease of growth over the period.

2.2.2 Fertility decline

The Thai demographic transition has been one of the fastest observed in developing countries (Knodel et al., 1987; Siriprachai, 1996). After World War II, the birth rate soared from 4% to almost 5% in the mid-fifties while, during the same period, the mortality rate declined from 3.2% to 1.8% (Bourgeois Pichat, 1959). Continuing declining death rates sustained a growth rate slightly above 3% until the late 1960s. In 1970, government agencies (more effectively paralleled by NGOs) launched several programmes to disseminate family planning and population control measures (Wongboonsin, 1995). These actions, together with a surge in urbanisation contributing to the adoption of an urban way of life (reduced family size, higher education, later age at marriage, etc) dramatically cut off population growth to a rate of 1.2% in 1995 (NSO, 1997a) and 0.9 at present (ESCAP, estimate)¹².

In the rural countryside, the reduction of the average family size, both because of out-migration and declining fertility rates, was of great significance. It not only contributed to the levelling-off of the agricultural labour force but also – and this is more meaningful for the issue under consideration in this paper –, it is nowadays starting to contribute to the reduction of land fragmentation by inheritance. The decline of large families (with more than five members) in our six provinces between 1978 and 1993 is shown in Fig. 2. This change mirrors the fertility decline, despite the counterbalancing factor of the increase in life expectancy.

FIG. 2: DISTRIBUTION OF HOLDINGS ACCORDING TO THE NUMBER OF MEMBERS (1978 AND 1993 CENSUSES).



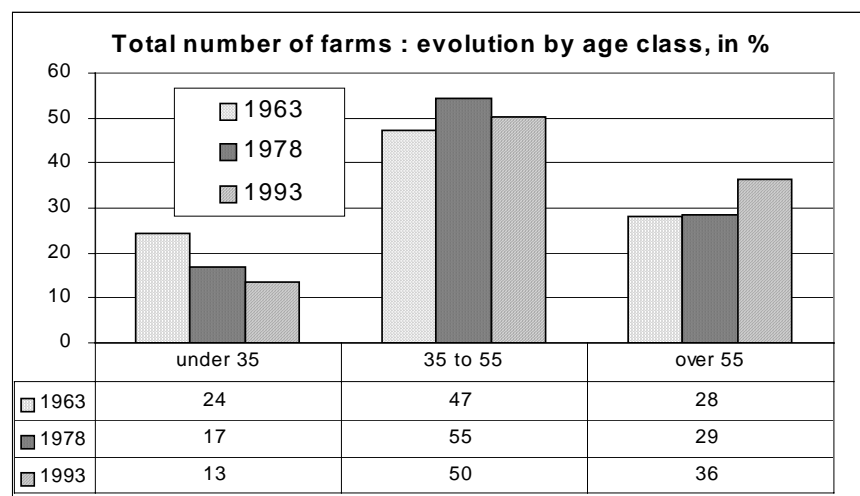
¹² The CIA's Thailand Factbook gives an estimated value of 0.93% for 1999. The situation may even be more dramatic as, until 1995, the rates for the Central Region (excluding BMA) were on the average 0.2% lower than national values (NSO, 1997c).

More generally, the average family size of agricultural households in the *rural delta*¹³ has dwindled from 5.74 in 1960, down to 5.32 in 1980 and 4.38 in 1990 (Molle, forthcoming). This situation is further compounded by the fact that the average age of the members of a given holding is on the rise.

2.2.3 The ageing farmers' population

The overall ageing of the agricultural population in the delta is clear and is a logical consequence of: 1) the declining fertility; 2) out-migration (the great majority of migrants are under 35 years old), and 3) the increase in life expectancy: between 1975 and 1995, life expectancy increased from 58 to 70 and 64 to 75 for males and females respectively. Fig. 3 shows the share of farmers under 35 years old, between 35 and 55, and over 55 years old. The “young” farmers’ category dwindled from 24% to 13% over the 30 years’ span considered. While the evolution of the age pyramid first favoured the 35-55 years old class during the 1963-78 period, it later translated into a hike in the “over 55” category, which gained 7% between the last two censuses¹⁴.

FIG. 3: DISTRIBUTION OF FARMS BY AGE CLASS OF HOLDER (1963, 1978, 1993)

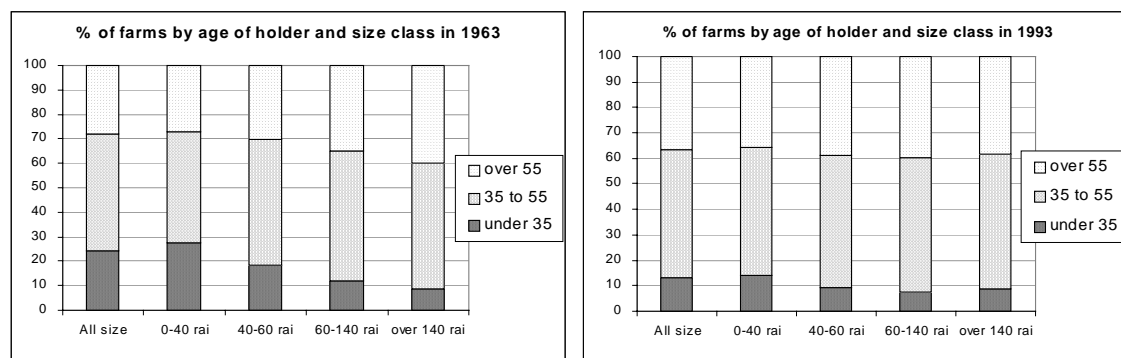


¹³ In what follows, the “rural delta” will designate a set of amphoes excluding Bangkok and its vicinity and best matching the actual irrigated delta (see map in Annexe 1).

¹⁴ This trend however is probably inadequately captured by census statistics: households are computed based on their administrative declaration at the district office and field surveys offer evidence that many of the oldest “farmers” are in fact old people who are being taken care of by one of their children. Although registered in their names, these households are classical three-generational compounds. Their relative number is increased by the change in life expectancy.

Fig. 4 shows that while older farmers tended to own larger farms in 1963, this contrast has become much less significant 30 years later, as the three age categories in each farm size range differ slightly.

FIG. 4: PERCENTAGE OF FARMS BY AGE OF HOLDER AND SIZE CLASS: 1963 AND 1993.



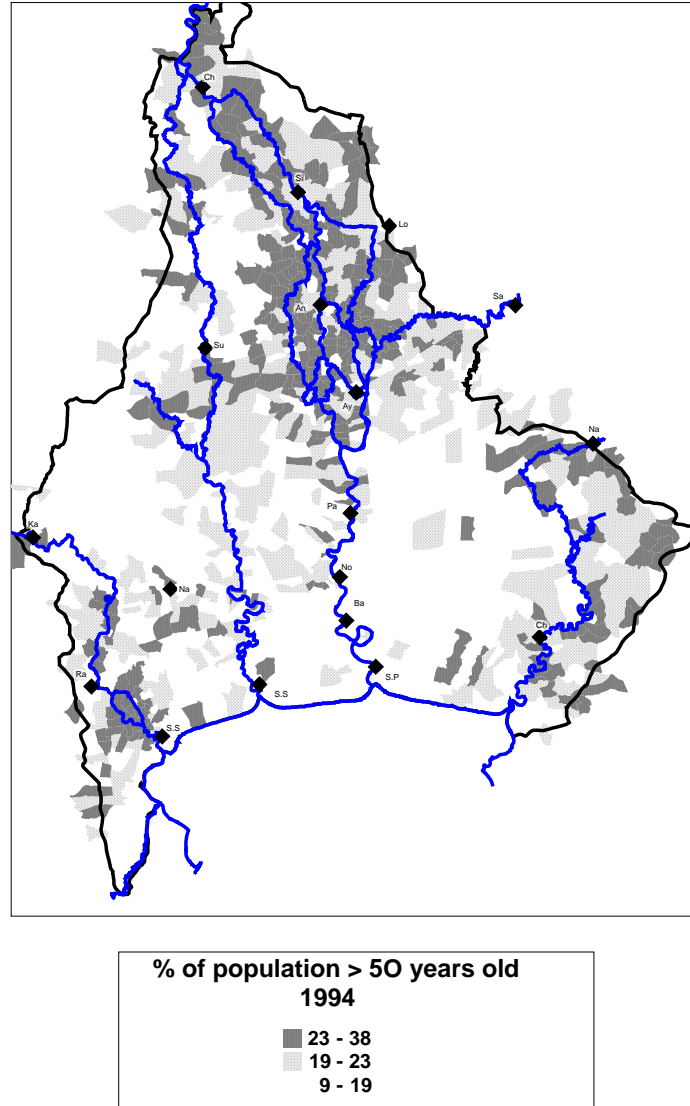
Ayutthaya stands out as the province with the “oldest” farmer population, holders over 55 years old making up 43% of the population, while only 9% are under 35. In contrast, Suphan Buri is the “youngest”, probably because its upland expansion has attracted young migrants.

TABLE 6: PERCENTAGE OF HOLDERS BY AGE CLASS, CENSUS AND PROVINCE.

Census year	Under 35 years old			35-55 years old			Over 55 years old		
	1963	1978	1993	1963	1978	1993	1963	1978	1993
Ayutthaya	22	15	9	48	54	47	30	31	43
Ang Thong	24	18	11	47	53	50	30	29	38
Pathum Thani	24	18	11	48	53	52	28	29	38
Sing Buri	26	17	13	48	55	50	27	28	37
Suphan Buri	28	20	17	47	55	51	26	25	32
Nakhon Pathom	22	12	12	48	56	51	30	32	37
Total	24	17	12	47	54	50	28	29	37

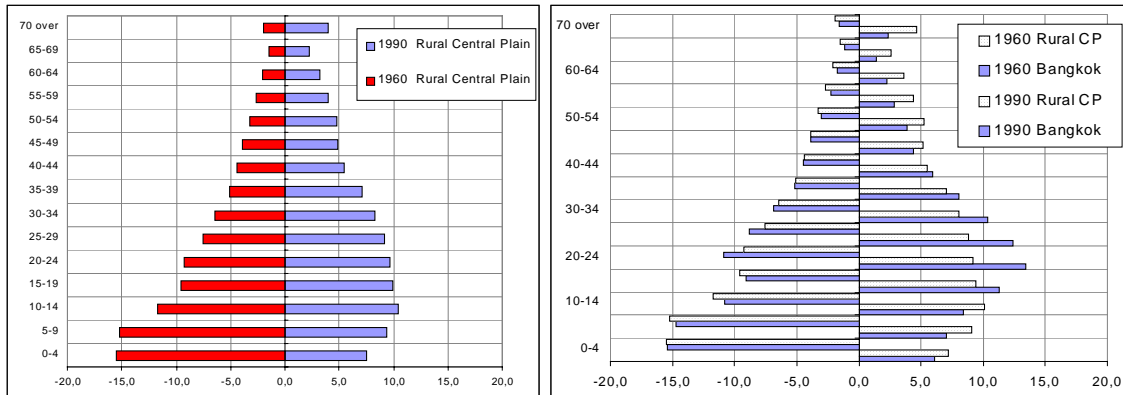
A more accurate spatial vision of this process can be seen in Fig. 5, which shows the percentage of the population over 50 years old by *tambon* (NRDC, 1994; the thick black line indicates the boundaries of the irrigated area). It is clear that the regions with the highest percentage correspond not only to the flood-prone area but also to Nakhon Nayok Province and to the south-east of Chai Nat. In this latter area, high population density has driven most of the youth towards the city (Chai Nat and Sing Buri are the two provinces with higher net out-migration in the 1985-90 period).

FIG. 5: POPULATION OVER 50 YEARS OLD (BY *TAMBON*, 1994).



More generally, if we consider the total population living in the rural area of the Central Plain in 1960 and 1990, and if we plot their distribution by age classes (Fig. 6), we observe a spectacular change in the structure of the age pyramids. While the population under 20 years old makes up half of the total in 1960, it represents only 35% of it thirty years later. During the same period, the population over 50 years old has increased, as shown earlier for the farm holders. Fig. 6 also compares this pyramid with that of Bangkok for the same years. Whereas in 1960 the pyramids slightly differ, the contrast for 1990 is striking: Bangkok's pyramid appear much sharper, with a bulging strata of population between 15 and 35 years old, while that of the rural area includes more children and more elderly people. This confirms that out-migration to Bangkok overwhelmingly concerns young (male and single) people.

FIG. 6: AGE PYRAMIDS, BANGKOK AND THE RURAL CENTRAL PLAIN (1960 AND 1990).



Source: population census, several issues

Overall, these major demographic trends indicate that the depletion of the agricultural population by out-migration and its transfer to other economic sectors (even in rural areas) is so strong that the remaining agricultural population is – numerically - under the reproduction level. Fertility slump contributes with these factors to the decrease of family size and to the ageing of holders. With the depletion of its younger strata, the rural *age pyramid* evolves towards an “*age tower*”.

2.3 Patterns of land transmission

Land transmission patterns in rural Thailand show a great variety according to the region and the time. Regarding the Central Plain, some authors report that land was “traditionally” expected to be divided and inherited among daughters, while the bridegroom’s family was supposed to bring its share in forms of money or other valuables (Tomosugi, 1977; Gisselquist, 1977). Ultimogeniture is often practised with respect to the house and equipment, because the youngest son or daughter often takes care of his/her parents in their old age (Kaufman, 1960). Although a few farmers mention land inheritance to daughters as the ideal traditional custom, the preferred and most common actual practice is rather to slice up the land among all children¹⁵.

¹⁵ Amyot (pers. com.) considers that there is no wide agreement on this issue and that village studies are too fragmentary to be conclusive. Most observers, however, seem to admit both the prevalence of partible inheritance and the high variety of cases in practice. See, for example, Toru (1968), Mehl (1981) and Wagstaff (1970): “Literature concerning inheritances practices in Thailand is scarce. It appears, however, that a principle of equal division of inheritance constitutes the basic land inheritance tradition. This tradition varies somewhat throughout the kingdom according to geography, wealth and population size, but it is generally practised”. Toru (1968) reckons that the “custom of equally divided succession is regarded as dominant all over Thailand, but so far no case study has been made to investigate the details of the system”.

This prevailing pattern of equal division is held widely responsible for land fragmentation¹⁶. It also entails a “*family cycle*”¹⁷ in which newly wedded couples start their “economic life” with a set of assets corresponding to only a share of their parents’ wealth. As residence after marriage is matriloc¹⁸, “men resided in their wives’ parent’ places as mere sources of manpower until their wives inherited land from parents¹⁹” (Tomosugi, 1977). This, in general, may last a few months or a few years, the young couple capitalising before setting itself independently, but may also not happen at all. As the family grows in terms of mouths to feed and, later, in terms of working capacity, farmers try to expand its activities and its land, either through rental or through purchase, and to accumulate. When their offspring later marry and achieve some economic independence, they split progressively and transfer their wealth and land assets²⁰. Depending on the level and on the reliability of the support they expect from their children in their old days, they often retain a portion of the land as security and rent it out to ensure a small income. Generally, this land is passed on to the child who has taken care of his parents and is also a way to ensure a decent funeral²¹. The family cycle, for which underlying logic is a correlation between the family size and the amount of land farmed, is well expressed by the Economic Farm Survey of 1953 which shows that farm size classes of [0-6 rai], [6-15 rai], [15-30 rai], [30-60 rai] and [over 60 rai], correspond to average family sizes of 4.9, 5.3, 5.7, 6.2 and 7.4 members respectively. This theoretical cycle is of course dependent on the land system permitting a flexible and permanent redistribution. What was observed in 1953 obviously only partly applies to the current situation, as the land market has become less flexible.

The question of land transfer from parents to their children deserves further comments regarding the difficulty in defining who can be considered a holder. The

¹⁶ Kaufman (1960) observes that “through the system of partitioned inheritance in which all children receive an equal part of the land, the acreage per capita is dwindling into plots so small in size that certain members of the household have little alternative but to sell. Meanwhile, there is a trend toward primogeniture as several families have left what little land they had to the eldest son”.

¹⁷ Popularised by Chayanov, the “family cycle” has been alluded to by Stifel (1976) and Kitahara (1977) with regard to the Central Plain.

¹⁸ “This pattern is not always followed and Ayutthaya is not always traditional in this sense. There are many cases of the young couple starting a new household immediately after marriage or moving in with the parents of the husband” (Amyot, 1976).

¹⁹ Kitahara (1977), also comments that “when a child gets married, the couple stays with the parent for several years. During this nascent period, the young couple works on their parent’s farm and prepares the money and goods for their future independence. If we observe the family type during this period it is an extended one (not nuclear). After several years, they build an independent house and turn nuclear”.

²⁰ This is not true in the Mon village located near Pakret studied by Pramuanratkarn in the 1970s. Land is passed on to children only at the death of parents, normally by equal partitioning.

²¹ Toru (1968) reports that this land is called “land set aside for funeral” in the South. This concern is undoubtedly present in farmers’ minds and sometimes appears in the interviews. Asked whether he would get the land after his parents’ death, one farmer once bluntly exclaimed: “sure, otherwise no one would look after their cremation” (*tha may hay, may mi kray paw*)

split of residence is the main indication of the emancipation of a new nuclear family, but there is a variety of situations depending on whether parents officially pass on their land to their children at the time they marry or later on, and on whether their offspring farm (part of) it for their own benefit or not. Transferring land ownership at the time of marriage seems quite often the case for girls, as land is considered as the main attribute of a girls' dowry.

Many young couples actually farm land that is still in the names of their parents. Generally, they are considered as (would-be owner) holders but their degree of independence, both in managerial and economic terms, is subject to a variety of situations through which it is often hard to establish a clear-cut limit between who is a holder and who is not²². Arrangements between parents and married children are varied and transitory. This prompts Kemp (1992) to state correctly that, "in practice, the renting of land to kin merges with the custom of parents giving the usufruct of land prior to its formal division".

Families are therefore predominantly nuclear, as "extended", or three-generational, units, and correspond to specific and limited phases of the life cycle. Janlekha (1955) reports that 65% of households in Bang Chan²³ were nuclear (+ 8% of families also taking care of ageing parents). This rate is confirmed by Piker who found, near Ayutthaya, (in 1968) that nuclear families had outnumbered three-generational families by a ratio of more than two to one ("a frequency predictable from the norms which govern the domestic cycle"). Amyot (1976) observes a ratio of 67% of nuclear families. All these data are in neat concordance over a share of nuclear families slightly over two-thirds²⁴.

In addition to the question of the transition in land transfer referred to above, several other quantitative and qualitative factors intervene to make the linkage between inheritance patterns and the land system more complex.

The number of children by family will naturally be the principal parameter in the process of land transfer. Should a given farmer own 40 rai and equally divide his land between his, say, four children, these children would – theoretically - have to struggle

²² In fact, it is often observed in villages that elder people live with one of their children, while being completely dependent on them. These are therefore the real household heads, although the household is still registered formally under the name of the parents: this has undoubtedly had an impact on the census enumeration and probably accounts for part of the ageing process identified earlier.

²³ Village studied by the Cornell research team and located in Minburi (now within Bangkok Metropolitan Area).

²⁴ However the meaning of the extended family may well have changed, as it covers situations in which household heads prolong their control over the family labour force in order to accumulate as well as situations in which elderly people are supported completely by the younger generations (but often take care of their grandchildren, while their parents work outside the village, including Bangkok: Wongsith and Siriboon (1999) found that 64% of male elders (> 50 years old) and 46% of females in Ayutthaya help to take care of their grandchildren).

with a portion of 10 rai each. This dramatic fragmentation is first of all compensated by the fact that female children also inherit and, therefore, bring their share of land when marrying. This recombination will cut almost half of the fragmentation process²⁵. It also, to a much lesser extent, depends on the rate of nuptiality, which also tends to decline (IPS and NSO, 1977; Chamrathirong, 1980).

The number of children at the time of inheritance is a direct result of infant mortality (widely reduced) and of fertility: in line with the aforementioned decline of population growth observed in the last 30 years, the average fertility vertiginously dropped from 6.25 in 1965 down to 2.02 in 1995 (IPS and NSO, 1977; NSO 1997), and to 1.88 in 1999 (Thailand Factbook)²⁶.

The number of children *effectively* engaged in agriculture – or wishing to do so - also has a decisive impact on inheritance patterns. Children who stay with and take care of their parents most generally get higher shares than their siblings who have moved to urban centres (Tantikul, 1973; Tomosugi, 1977)²⁷. In addition, the heirs who are established in cities and have permanent jobs with a higher standard of living are often found to cede their land to their siblings who have remained to exist on agriculture: this can be done through leasing, either on a free basis or with a rent sometimes lower than the market level, or through preferential transfer of ownership (gift, low price sale,..). Such arrangements are also common in the case of one of the children marrying someone with a large land endowment. These features significantly contribute to smoothening the Malthusian threat of land division through inheritance practices.

The fact that the family land is composed already of several plots also creates an additional constraint to equal land division: if a father of two has a plot of 5 rai and another of 3, generally these plots will be transferred to his two children as such. This rigidity in plot partitioning contributes to the reduction in plot fragmentation within a given holding, as will be shown later.

It is to be expected that when land division is incompatible with the economic survival of the heirs willing to carry on agricultural activities (considering also their possible access to land from their family in law or through the rental market), customs are altered (Mehl, 1986). Such a situation, it should be observed, is also likely to be a strong deterrent to the possible wish of the heirs to continue farming and, in itself, contributes to reducing the number of candidates. It can be hypothesised that the

²⁵ But also leads to spatial dislocation: parts of rentals and land purchases are due to this distance.

²⁶ ESCAP's estimate for 1999 is 2.0.

²⁷ "There is no discriminatory treatment for male or female with respect to the youngest child's inheritance. However, there is a traditional factor in determining discriminatory treatment in land inheritance which frequently occurs with the heir who does not live with the parents" (Tantikul, 1973).

practice of equal division of land (among daughters or among all children) has been altered first by the increasing population pressure, resulting in non-sustainable holdings (first sensed in Bangkok and Ayutthaya regions), then with the appreciation of land from the 1960s onwards, making it increasingly difficult to grant daughters with land and sons with cash without prejudicing the latter²⁸. Early evidence of such adjustments are given by Janlekha (1955), who indicates that only 60% of farmers in Bang Chan received land from their parents, and by Kaufman (1960) who reports a trend toward primogeniture because of unsustainable land fragmentation. Parents are reluctant to divide their land and try to find compensation in the form of cash or other goods for the children not receiving land. Nowadays, with the growing demise of agriculture in the delta, old farmers with only a few rai (< 10) and several children to receive some inheritance often prefer to sell their land (especially if the price is attractive). The cash raised is then used for their own necessities and divided among the children.

More generally, detailed studies, such as those carried out by Mehl (1986) in the Northeast region, show that “there are innumerable variations [of inheritance patterns] due to individual family circumstances”, from which it appears that “parents have great discretion in distributing their property to whomever they wish, no matter what the customary or prevailing pattern may be”. This also applies to the delta.

Eventually, the declining fertility and the process through which youths decide to quit or not to engage in the agricultural sector govern and reduce the average number of children who effectively carry on the agricultural activities of the parent’s farm. Ideally, if the average number of these would-be-farmer heirs is less than two, then the total number of farms will tend to decline (because of the recomposition of farms through marriage, assuming no in-migration and a constant farm area).

Should, ideally, these would-be-farmer heirs receive all of the family land, then the average farm size, under the threshold of two heirs, would also increase, for the same reasons. Fragmentation is reversed and some concentration may occur. The fact that the heirs not engaging in agriculture generally cede (either through leasing, preferential selling or gifts) most of their land to their siblings (if any, or relatives otherwise) still engaged in farming, tends to take us close to this reality. The observation of many farms without farmer-heirs (old farmers selling their land, non-farmer heirs leasing their land) lends support to the hypothesis that this turning point is not unrealistic and that it may have occurred already, in particular in some parts of the flood-prone area of the Chao Phraya Delta; this will be discussed later in the paper.

²⁸ Some farmers also mention the fact that heavy accumulation of male family labour in the form of improvement of on-farm conditions in the 1960s and 1970s have made some farmers feel that depriving their sons of the land

2.4 Landlessness and indebtedness

2.4.1 Landless agricultural wage labourers

The question of landlessness in the Central Plain is diversely documented along the decades of this century. It is known that wage labourers and full tenants were to be found in the last two decades of the 19th century but this chiefly relates to Rangsit and other areas of the East Bank. This early landlessness is best understood as a transient process of emancipation of the peasantry from bondage. As plenty of land was available for free taking, these situations of tenancy and wage labour mirror the constraints on capital and the risk affixed to the land frontier which acted as deterrents. This also provides an opportunity to specify the terminology used hereafter (unless otherwise mentioned). *Landless farmers*, or *full-tenants*, are holders who manage plots of land which are entirely rented from others. They must be clearly distinguished from *agricultural wage labourers*, who draw the largest part of their income from diverse agricultural work, most often on a daily or piecework basis²⁹.

While official preoccupation on that issue is already sensed in the early 1930's, after the World Crisis and in a time when the clearing of the delta was almost completed, it is only in the late 60's that the issue gains momentum. With the farmers' demonstrations of the "democratic interlude" (1973-76), this translated, in 1975, into the implementation of the Agricultural Land Reform Office (ALRO). In the seventies, most scholars were envisaging a Malthusian catastrophe (see comments in the introduction and Stifel, 1976) and foreign donors and powers, preoccupied with a situation which might fuel the expansion of communism, also largely contributed to encouraging debates and surveys on the question³⁰ (Wagstaff, 1970).

In the early eighties, ALRO launched a series of regional surveys to assess the magnitude of the problem in Thailand. These surveys revealed that 9% of agricultural households were landless wage labourers. The problem did not reach wider magnitude principally because of the still large land reserve available in the country. In the 70's, 70% of the farmers found to have settled in public land reserves had left their homes because of landlessness, showing how the land frontier served as a relief for densely populated areas (Chirapanda, 1983).

would be some kind of injustice.

²⁹ ALRO's definition is given by Chirapanda and Tamrongtanyala, 1984: "The landless are those with little or no ownership rights in land; they must earn their livelihoods primarily from the sale of their labour; the near-landless are tenants or sharecroppers cultivating parcels owned by others".

³⁰ Wagstaff urges officials to dedicate due attention to this issue "so that pockets of discontent and subversive insurrection will not appear"...

It is in the Central Region, however, that landlessness (and tenancy) is found to be most widespread, with rates much higher than the ones observed in the other regions (Chirapanda, 1984). Data by Province are available for 1974/75 (Division of Land Policy and Planning, cited in Ramsay, 1985) and for 1979 or 1982 (regional surveys carried out by ALRO). Table 7 shows that Ayutthaya presents higher rates, with around one third of its agricultural population deprived of land. Several other provinces have rates close to 20%. The two surveys show some discrepancies (a 50% decrease for Sing Buri and Lop Buri, for example), which cast doubt on the survey methodology and on the definitions adopted³¹.

TABLE 7: RATE OF LANDLESSNESS AMONG FARMERS³²

Survey	1974/75	1979		1974/75	1982
Ayutthaya	38	30	Nonthaburi	17	23
Ang Thong	24	18	Nakhon Pathom	14	20.5
Saraburi		11	Pathum Thani	26	20
Sing Buri	19	10	Ratchaburi		18
Lop Buri	18	9.2	Kanchanaburi	4	3.5
Chai Nat	8	5.4	Nakhon Nayok	24	
Samut Songkhram	24		Samut Sakhon	22	
Suphan Buri	9				

Source: Chirapanda, 1984; ALRO in Ramsay, 1985

The interpretation of the causes and consequences of landlessness is a subject of much controversy³³. It is a widely held view that landlessness is the result of the eviction of small and poor farmers from an increasingly capital intensive agriculture, through the accumulation of debts (Tomosugi, 1969; Turton et al. 1978; Douglass, 1984, Chiengkul, 1983; Tanabe, 1994). Other authors lay emphasis on population pressure and land fragmentation by inheritance as the main causes of landlessness (Montri, 1930; Wagstaff, 1970; Piker, 1975; Suvaphorn, 1975; Chirapanda and Tamrongtanyala, 1981). Both processes are obviously at work, but in different proportions according to the sub-area and the point in time, which calls for a cautious treatment.

More generally, the origin of the population of wage labourers lacks of clear evidence. It is often assumed that they correspond to a further downfall of full-

³¹ One difficulty comes from the definition of agricultural wage labourers who, in reality, perform other non-agricultural tasks such as construction. Distinguishing agricultural wage labourers from non-agricultural wage labourers is often very arduous.

³² These figures include landless people who may grow vegetable and fruits in their housing compounds for sale.

³³ And resist simplification: "Landlessness and near-landlessness, like poverty and inequality, are the result of a complex interaction of topographical, socio-economic and political forces operating over centuries and it is difficult to disentangle these causes from one another or indicate their relative importance" (Sinha, 1984).

tenants. The 1964 survey over 5 central provinces³⁴ found that 81% of the full tenants never possessed any land prior to becoming tenants. Similarly, the 1965 survey over 11 central provinces³⁵ found a percentage of 87%. Ten years later, ALRO surveys found that most of the landless were born or long-time residents of their province (only 13% of landless had moved from another province in the last 5 years preceding the surveys), it was still not clear how they had become landless. Only 7% of the landless had land 10 years ago; similarly, only 13% of people with less than 5 rai had more land 10 years ago (11.5% had less and 76% the same amount), of which about a third (*only 4% of the total farms*) said that the loss of land was caused by indebtedness. A good proportion of them attributed it to land fragmentation as a result of inheritance (Chirapanda and Tamrongtanyala, 1981).

Other fragmentary informations are given by village studies. In Ban Noi, near Ayutthaya, "villagers report that in pre-war days, the majority of village residents owned land, and some of the older villagers remember a time when landlessness was relatively rare. Today however, 60% of village families are landless (including full-tenants), although many of them are children or grandchildren of landed families" Piker (1967). In the village of Ang Thong Province studied by Gisselquist in 1975, 27 families were landless: only 10 had land before and had mainly lost it because of debts. Seven of them were renting their former land; only three had become wage labourers.

The 60's surveys suggest that there is a large part of the population of wage labourers which is rather "stable" and descend from one or several generations of landless farmers. This does not invalidate the fact that some of them obviously turned wage labourers as a result of the loss of their land but it entails that the reality might be more variegated. In 1975, Kitahara (1977) also notes that, in the village he surveyed near Ayutthaya, "there are large numbers of descendants of the rural labourers going back many generations. These families can partly be traced back to the descent of slaves".

This situation can be tentatively explained by two lines of arguments: the first one is that many landless farmers have left for the land or urban frontier and that they were therefore not captured by surveys carried out in the delta. This probably applies to the surveys carried out in the mid-sixties, at a time of sustained migration. The second is that there are several factors which can be raised to explain the lower geographical mobility of landless people, particularly wage labourers:

³⁴ Pathum Thani, Ayutthaya, Lop Buri, Nakhon Nayok, Nakhon Sawan.

³⁵ Including Phetburi, Nakhon Pathom, Suphan Buri, Chai Nat, Singburi, Saraburi, Bangkok, Chachoengsao, Samut Prakan, Thonburi, Kanchanaburi.

- Their lower economic status implies a greater precariousness and risk aversion. Often trapped in “one-sided relations with patrons, household heads remain both socially and spatially restricted in mobility” (Douglass, 1984). Wage labourers may be reluctant to give away even the precarious security provided by patron-client relationships within the village.
- A second reason is the well known selectivity of migration regarding educational levels. Chanond (1977, cited in Douglass, 1984) evidenced, in the early 1970’s, a sheer difference in the rates of illiteracy between landless (56%), small and middle farmers (26%) and large landowners (12%). With low educational levels, wage labourers often feel that they would not be up to some tasks and are barred from the jobs which require literacy or skill.
- A third reason is that rural wage labourers have a limited social mobility in the Capital. After 15 years in Bangkok, only 25% of the poorest strata of rural-Bangkok migrants could achieve some social mobility (Douglass, 1984). When their children, generally raised by their grandparents in the village, grow, they often come back to the village and “thus, the landless rural labourer class gets reproduced” (Kitahara, 1985).
- A fourth reason is linked to a higher economic precariousness in old ages, which works in favour of the children returning to take care of their parents, in case none of their children had remained.
- A fifth reason is that migration to the city is almost invariably undertaken only if some relative or close friend has already settled there and can offer advice, support and shelter. Factory owners reinforce this fact by only employing people recommended by some of their workers whose quality they have already tested. Asked why they did not go working in Bangkok, many labourers express that they “have nowhere to go” (*may ru ja pay nay*).
- Lastly, they may also prefer to stay in the countryside for a wide variety of other reasons, including the lack of attraction for urban life conditions, being too old (manufacture usually employ very young workers only, even locally: see Neullaong, 1992), other sources of income, remittances from relatives, strong local kinship relations, etc.

The extremely limited rate of unemployment (at least until the 1997 crisis), although under-employment is not uncommon, suggests that the prevailing offer of jobs in urban areas was unattractive/inaccessible to the landless population³⁶, who may

³⁶ This brings us to the crucial general question of whether out-migration has been predominantly a *pull* or a *push* process. It will be discussed in § 6.

have not responded to it for some of the reasons mentioned above. The two surveys mentioned earlier suggest that the economic situation of landless people is inferior to that of other farmers (see Wagstaff, 1970). The 1974-75 survey found that the yearly family income of wage labourers was three times less than that of other farmers (Ramsey, 1985). The 1979 ALRO survey in the Central Plain found little differences between the income of wage labourers, landless and farmers with less than 10 rai³⁷, while there was a continuous gap between urban and rural incomes. An earlier survey, in 1970 in Ayutthaya, showed that landless people had an income half of that of farming households (Chiengkul, 1983).

It stands to reason that the status of wage labourer or tenant being more precarious and less desirable than that of landed farmers, this difference is likely to translate into income differentials. Whoever has tried, however, to assess quantitatively the income of wage labourers engaged in a series of irregular and variegated activities will feel uncomfortable to support clear-cut quantitative statements on that issue. While it is relatively easier to inventory the activities of a farmer (though no child play), it is extremely difficult to capture the income of wage labourers or small farmers with multiple incomes through surveys: in the 1979 survey, for example, their non-farm income was found to be 7,200 baht, while farm income was only 5,184 baht, and 40% would receive remittances. In addition to the difficulties in capturing composite and fluctuating incomes, the auto-consumption of farm products (eggs, hens, backyard fruits and vegetables) and self-caught fish is often extremely significant and not little contributes to shoring up³⁸ the family's subsistence needs.

In contravention to the picture of destitution commonly raised when it comes to the landless issue, two points also deserve mention. A first one is the impression or evidence gathered by some observers that "although non-landowners on the average do not do as well as their landed neighbours, the combination of mainly local employment opportunities has made it possible for a number of village families to subsist as non-landowners for two generations at a decent standard of living by village norms" (Piker, 75). This is echoed ten years late by Visser (1980) who reckons that "even landless villagers, who do not rent land, do not feel the pinch so strongly that they are inclined to consider migration or to find out about the labour market in the towns". These observations are obviously punctual and fragmentary but not to a greater extent than those which convey (often in a general way) a darker picture.

³⁷ It's even the wage labourers which are credited with the higher net income (12,292 baht, against 10,199 and 11,381 baht for the two other categories).

³⁸ "The average household has animal protein obtained from self-caught fish, eggs from their own chickens, or meat from their own slaughtered animals as well as home grown vegetables at its disposal for about 200 days per year, and self cultivated rice for the entire year" (Visser, 1980).

This does not serve to deny the existence of instances of rural poverty, even less to justify policies or historical facts adverse to the delta's peasantry. Nevertheless, it may serve to put the delta into a wider historical comparative perspective (as historical accounts from other Asian countries are generally much drearier) and also contribute to explain the existence of a population of landless families which appears to be both growing in numerical terms, and stable in terms of family reproduction.

These observations date back twenty years or more. No additional comprehensive data on the question have been provided hitherto, raising the concern that the rapid change occurring in the agrarian system (Kasetsart University and ORSTOM, 1996) may have led to a recent increase in landlessness or a worsening of the income differential. In 1987, landless agricultural holdings were estimated at 500,000 in Thailand (Chirapanda, 1998). Regarding the central Plain, some hints on the present situation can be derived from an analysis of the national population (1960, 1970, 1980, 1990) and agricultural (1963, 1978, 1993) censuses data.

If we compare the definition of *agricultural households* (of the population censuses) with the definition of the (*agricultural*) *holdings* in the agricultural censuses³⁹, we may note a significant difference: households are classified as agricultural if agriculture is the main occupation⁴⁰ of the head of the household. They, therefore, include families who do not own any land and rent out their labour force, or the main part of it, in the agricultural sector. On the other hand, households in the agricultural censuses are considered as agricultural if they cultivate a land of at least 2 rai (regardless of the tenure status), or raise a given minimum number of animals depending on the type of breeding, or derive an income from agriculture higher than a given amount.

³⁹ The three censuses bear a few slight differences: in **1963**, a holder should comply with one or several of the following conditions: 1/ use two or more rai for agricultural operations; 2/ employ land of one-half rai or more in area for growing vegetables; 3/ earn an income of baht 2,400 or more from the sale of products obtained from the holding; 4/ be in possession of one head of cattle or water-buffalo, or own either singly or in combination five or more pigs, goats and sheep; 5/ own a flock of more than 100 chickens and/or ducks.

In **1978**, the conditions are: 1/ operate an area of two rai or more; 2/ raise 5 or more heads of cattle or buffaloes, or 5 or more swines; 3/ 100 or more ducks or chicken; 4/ earn an income from selling crops or animals or animal products of at least 5,000 baht during the last twelve months.

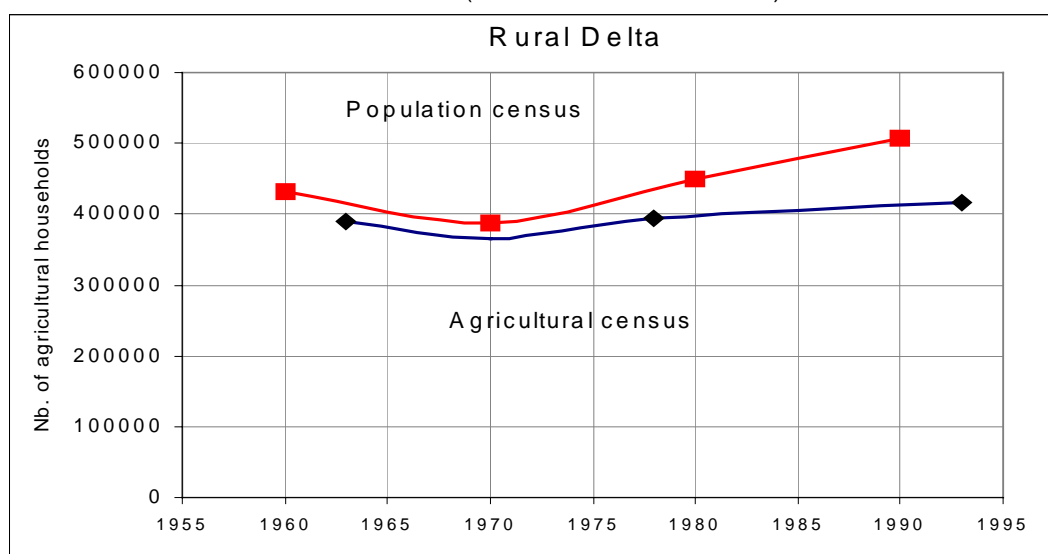
In **1993**, the conditions to be met are similar, but for the number of heads of cattle or buffaloes (reduced from 5 to 2) and the yearly income (actualised at 6,500 baht).

The vegetable production over half a rai or more, as considered in the 1963 census, is the main difference likely to introduce a bias in the comparison of the three censuses. The 1978 census also separates the holdings "with land", from the "holdings with no land". The latter are holdings raising poultry or producing mushrooms, silkworms, orchids around the house: it is not clear why these holdings are treated separately, given that they appear under ,and together with, the "less than 2 rai" category. They have been aggregated in our calculation. The "under 2 rai" category between 63 and 78 is rather stable, with a 10% decrease. The "with no land" category is absent from the 1993 census. It is assumed that the "under 2 rai" is in continuity with the "under 2 rai + with no land" total considered for 1978. The increase of this category is 40% between 1978 and 1993 but this is coherent with the change observed for the other categories under 6 rai.

⁴⁰ As many wage labourers may obtain wages in both agricultural and non agricultural activities, it may not always be easy to determine what is the main activity of the head of the household.

If we now plot the number of agricultural households and agricultural holdings on the same graph, we observe an extremely significant divergence of the two curves. Fig. 7 presents the totals of the agricultural households and holdings in all the *amphoe* included in the *rural delta* (excluding Bangkok and its vicinity: see map in Annexe 1). While the points of the two series before 1975 are consistent⁴¹, the later ones show a growing discrepancy reaching more than 100.000 holdings, approximately 20% of the total agricultural holdings. This suggests a growing number of landless people engaged in the agricultural sector. The contraction of the difference around 1970 is consistent with the growth of the man/land ratio at that time: family labour is available in surplus (few job opportunities) and the class of agricultural labourers is dramatically depleted by out-migration.

FIG. 7: COMPARISON OF THE EVOLUTION OF THE TOTAL NUMBER OF AGRICULTURAL HOUSEHOLDS ACCORDING TO AGRICULTURAL AND POPULATION CENSUSES (GIVEN FOR THE RURAL DELTA)



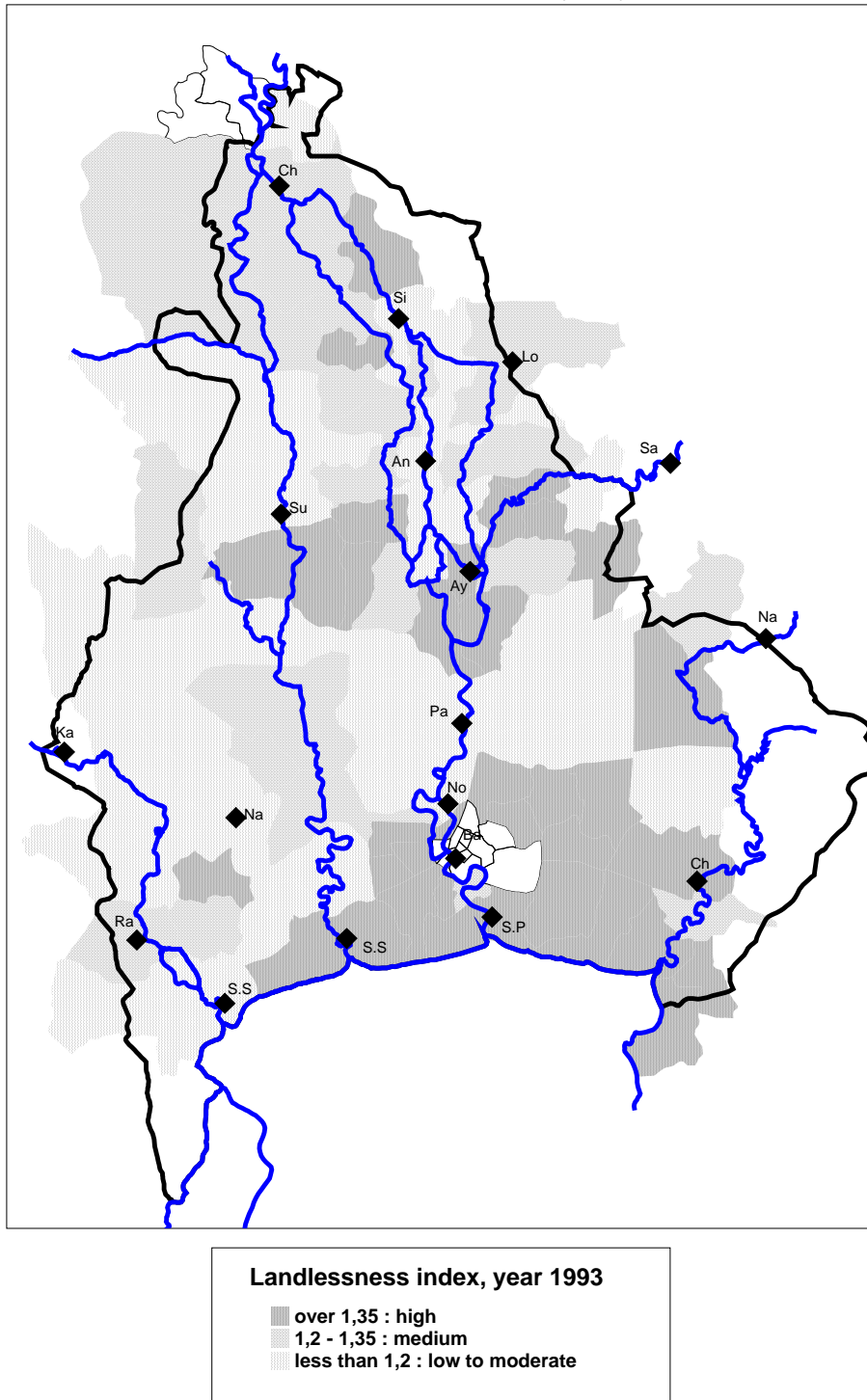
This situation can be further spatially described by using an index composed of the ratio (by *amphoe*) of the agricultural households to the agricultural holdings for the year 1993⁴². Fig. 8 displays the mapping of the index⁴³ for the set of *amphoe* best matching the delta (the boundary of the irrigated area appears in dark black).

⁴¹ A visual qualitative inflexion has been added to the "Agricultural census" curve in the early 70s to compensate for the lack of data and to take into account the drop in holdings resulting from the out-migration in this period, evidenced elsewhere (Molle, forthcoming) and shown by the "Population census" curve. Although the percentage of wage labourers in the out-migrant population is unknown, it can be hypothesised that it is much higher than in the population of origin.

⁴² The total of agricultural households for 1993 has been estimated by extrapolating the 1980-1990 trend over the next three years, resulting in a correction by a factor of 1.034.

⁴³ This index can be taken as a proxy of the landlessness but should not be regarded as an indicator of absolute landlessness occurrence. It is little suggestive, in particular, of a significant class of wage labourers in the 70s, as reported in the two surveys above mentioned.

FIG. 8: LANDLESSNESS INDEX (1993)



The map shows three main zones of higher concentration of wage labourers: the first one is Bangkok Vicinity and its extension towards the coastal area and Chon Buri. The high ratio of wage labourers is associated with labour intensive peri-urban horticulture, aquaculture and with a high occurrence of urban absentee owner who

may sometimes possibly hire labourers to operate their land. The second zone is around Ayutthaya, with an unexpected extension to the south of Suphan Buri. It can be correlated to the low profitability/risk of rice cultivation in flood-prone areas, a high proportion of old farmers unable to carry out farm operation by themselves and to the proximity of urban centres providing complementary job opportunities⁴⁴. A smaller zone near Sing Buri may be related partly to flood-prone rice cultivation and partly to the high agricultural population density in this province. The Ratchaburi and Chachoengsao areas (labour intensive diversification and aquaculture) also stick out as areas with an index between 1.2 and 1.35.

These observations support the hypothesis that landlessness is significantly linked to the occurrence of labour intensive agricultural activities⁴⁵, with the opportunity for complementary non-farm activities, and with flood-prone areas (high presence of *inactive farmers*). It also suggests that wage labourers in Chai Nat and Sing Buri provinces are chiefly employed in the active double and triple rice cropping, as these regions have rather high human densities and little diversification.

In contrast with the situation in the 60's and 70's, there remains little doubt that this increase in wage labour in recent years is almost totally due to the reproduction of the population of wage labourers itself. On-going field surveys in 3 villages⁴⁶ of the Central Plain found with very few exceptions that landlessness had happened in former generations. This is due to the set of factors which contributed to stabilising the agrarian system in the last two decades (see chapter 7), to a better access to institutional credit⁴⁷ but must also be qualified by the fact that selling some land (at a high price) has also been a way to clear debts in some instances and may not always appear as loss of land. Despite (or in complement to) the idea that landless people are the first to respond to migration opportunities, there were some instances of landless families with 7 or 10 children, who were all residing in the proximity of the parental house. This can probably be partly explained by the constraints to mobility mentioned above.

⁴⁴ In addition the regions of Ayutthaya and Ang Thong are also known for their non-agricultural activities (bricks, handicrafts, etc)

⁴⁵ This hypothesis is also supported by Ramsey (1985), who believes that "*the provinces with the highest concentrations of agricultural labourers are the ones with the highest demand for such labourers*". His further argument that the adoption of new technology and growing farm size have boosted the demand for labour is biased because estimates for the whole country are used to substantiate the second point. In the Central Plain, in a context of land frontier closure, the opposite is true, as it will be shown later.

⁴⁶ Located respectively in Suphan Buri, Lop Buri and Ayutthaya provinces and chosen for their contrasting cropping intensities.

⁴⁷ Mortgage is not uncommon but, in case of non-repayment, it seems that local banks tend to roll the debt for a few years before demanding foreclosure.

2.4.2 Indebtedness

The level of indebtedness may also provide some hints on the possible and commonly stated relationship between debts and the loss of land. This issue is unfortunately equally loosely documented. While it is known for sure that indebtedness has risen to extremely high and damaging levels in some periods of history, there is no clear vision of the evolution of the situation over time; uncertainty also remains on whether it is nowadays a crucial problem or not, as borrowing money is being considered as a part of the improved access to institutional credit.

Indebtedness is a major thrust fuelling the expansion of the land frontier around 1910. The delta can be conveniently schematised as three embedded circles: the inner one is Bangkok, the middle one includes the area with land development initiated and controlled by the state or the nobility (Rangsit and most of the East Bank), the outer and expanding one is mostly reclaimed by the peasants themselves (what could be termed the “*silent frontier*”⁴⁸). There is accumulated evidence that the conditions imposed by the landlords on those who chose to work in the second circle, either as tenants or as wage labourers, reflected a process of mere extraction of surplus from a labour force which not even had the possibility to settle down: the instability of rice production at that time could hardly allow them any accumulation and, rather, heavy indebtedness was commonly evaded by fleeing into the wilderness of the land frontier (Jonhston, 1975; Phongpaichit and Baker, 1997). This process both extracted more than the available surplus produced in the second circle and allowed for the reclamation of the third one with little or no investments from the state or the landlords. Unable to control this outer circle, they concentrated their economic interests on taxation and exports rather than on production itself, while Chinese were taking over distribution and milling.

Later, the world wide crisis of 1929, which resulted in a 60% cut in the price of paddy, also had dramatic repercussions on farmers' economy (Piker, 1975). Zimmerman's estimates (1931) of the percentages of indebted rural families in 1930 for the Central region amounts to 49%. An official document dating 1930 states that “it may be safely said that at the present day the peasant cultivators, in those parts of Siam where rice is grown for commercial purposes, are as a class heavily in debt to private money-lenders: and the moral consequences of this indebtedness are of a disastrous nature, for the peasant are not only losing proprietorship of their land, but in addition all initiative and desire to improve their lot” (Ministry of Commerce and Communications, 1930). A later document issued by the British embassy also reports that “in 1934 agricultural indebtedness was Siam's major domestic problem” (Tomosugi, 1969).

⁴⁸ On account of the scant information available on the process of colonisation outside the landlord area.

The situation in the post-WWII period is unclear. The 1949 FAO mission believes that “the majority of our farmers still work their own land free from the inheritance of heavy indebtedness which used to be the perennial burden of the peasant class in some countries”. Although it expects the most commercialised region (Central Plain) to have more acute problems, the report expresses the hope that this “controversial point” be cleared-up by the forthcoming census (1950). The 1953 Economic Farm Survey indicates that **35%** of farmers of the Central Plain⁴⁹ were indebted and that 45% had borrowed money in the last 5 years. Only one fourth of farms under 6 rai were found to have debts, while half of the larger ones (over 60 rai) had, with annual interest rates as high as 9 to 35%. Average debts, however, were around 1,000 baht, only 3% of the farmers total assets. A 1958 survey in 20 provinces of the Central Region revealed that **50%** of the farmers were in debts, with this rate increasing in the core delta and reaching 85% near Bangkok (Naksawat, 1961; cited in Mehl, 1981). Only 21% of them had borrowed to make improvements on their farm. In 1962, Thisyamondol et al. (1965) found levels of **68%**; the survey provides details on the types of loans and reveals that 48% of them related to living expenditures, 22% to farming operational costs. More than 40% of loans are contracted with relatives and neighbours and 45% had one to six months duration, 25% between 6 to 12 months.

The 1964 survey on 5 provinces (DLD, 1964) reported that **95%** of tenants, **94%** of owner-tenants and **51%** of land-owners were in debt in 1964. 57% of the tenants had borrowed for agricultural production purposes, 24% for consumption needs, 18% for rites et customs, 1% for the payment of former debts.

The 1965 survey on 11 central provinces⁵⁰ found **52%** of all owner farmers in debt and **74%** of tenants. More than half of them had borrowed money for production purposes, 27% for consumption, 8% for rites and 5% for debt repayment. The 60’s are a period of growing activities for local money lenders. Many farmers invest in land grading in an attempt to reap the benefits of the new irrigation system. Depressed prices and technical shortcomings force many of these farmers into debt; some evade them by moving to the upland frontier, reproducing the pattern observed at the beginning of the century.

In 1969, in his village of Banoi (flood-prone area, Ayutthaya), Piker (1983) found that half the villagers had no debts, while half of those who had were not poor by village standards, and suggests that “important though debt may be in the overall economic picture, it has not at least recently constituted an oppressive burden to most

⁴⁹ The area in consideration in the survey includes the northern central Plains (Sukhothai, Phitsanulok, Kamphaeng Phet, Pichit, Petchaboon) but excludes Kanchanaburi, Rayong, Trat, Chanthaburi and Chon Buri). This may conceal a more critical situation in the core delta.

villagers". Caution is requested, however, as "of those who had been completely ruined by debt, many had left the village to seek livelihood elsewhere, and were not caught up in the sample".

Indebtedness in the 1970's has been reviewed by Onchan (1982) who states that "the burden of debt among the Thai farmers is not as heavy as generally understood". Three farms out of four, however, have debts, the amount of which are higher in the Central region (around 7,000 baht/family on the average, against 2,000-3,000 baht in the other regions). Data from Ayutthaya and Nakhon Nayok show that debts correspond to 16% of the farm assets and between 27 and 38% of the yearly farm income. Data for the Central Region dating 1974 and 1976 show that debts amount to 17 and 20% of the yearly farm income. Interest rates higher than 3% a month are not common and a considerable proportion of farmers, especially small farms, borrow without paying interest (mostly from non commercial money lenders such as relatives and friends). The interest rate appears to decline gradually, as a result of the dramatic increase in the supply of institutional credit initiated in 1975⁵¹ (Onchan, 1982). Other fragmentary information include Fuhs and Vingerhoets (1972), who observe **60%** of indebted farmers in 2 villages of Ayutthaya, in 1970 (22% with no interest and 58% with 1 to 2% interest per month; 54% of the sources are relatives or neighbours); Phipatseritham (1980), putting the share of indebted farms in 1975 at **56%** and Kaewthep (1986) who found **55%** in a survey of 12 villages of the Central Plain in 1975-76 (with 42% of the loans for investment in land).

Evidence of the link between indebtedness and loss of land in the Mae Klong area is provided by Ratanadilok (1990), who found that the main reasons for the indebtedness of (mostly) sugarcane farmers in *amphoe* Kamphaengsaen (Nakhon Pathom Province) were low prices (45%), natural risk (water)(51%), and pest incidence (4%). 35% of the farmers had to sell some land to pay back debts.

More recent data from the 1993 census indicate that only one out of three small farms (with less than 10 rai) is indebted, while almost two out of three large farms are (Fig. 9). These figures include any kind of debt. This confirms an important while little noted point about indebtedness: the fact that marginal tenants and small farmers avoid debts like the plague, on account of the fragility of their economic situation⁵². Similarly, only 17% of the landless people identified in the 1979 ALRO survey of the

⁵⁰ See footnote note 35

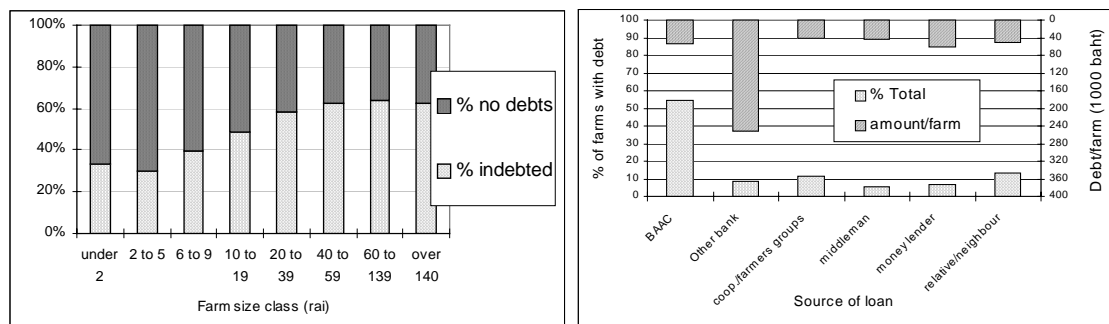
⁵¹ Further to some pioneer experience of rural credit by Bangkok Bank and the BAAC, in 1974 the Kukrit government decides that all commercial banks were to lend at least 5% of credit outstanding at the end of 1974 to the farm sector

⁵² Their fear of debts is clearly expressed in interviews, although they often reckon borrowing very small amounts of money for short periods (50, 100 baht or a bit more). However, it must be stressed that they would in all likelihood face big difficulties to find sources from which to borrow large sums, as they have no collateral to offer.

Central Plain were indebted and only 19% of farmers with less than 10 rai (Chirapanda and Tamrongtanyala, 1981).

Fig. 9 also shows that more than half of the loans are contracted to the BAAC (Bank of Agriculture and Agricultural Co-operatives) but that loans made with other commercial banks are 5 times higher than those made with other sources. This is because the majority of BAAC loans are production loans, while farmers mortgage their land to commercial banks to get higher loans.

FIG. 9: PERCENTAGE OF INDEBTED FARMS, SOURCE AND AMOUNT OF LOAN (1993, 6 PROVINCES)



The loss of land through indebtedness ought to be linked with foreclosure consecutive to mortgage. Stifel (1975) found average levels of loss of land for 5 years periods as 2% and 1% for Ayutthaya and Nakhon Pathom respectively (but temporary surges around 1930 and during WWII), although encumbrances through mortgage and *khai faak*⁵³ revolve around 10%⁵⁴. Montesano (1992) has shown that mortgage has become a widespread phenomena after the radical changes occurred in the credit system in the mid-1970s. However, his study - relative to three *tambons*, one of which is included in the irrigated part of Chai Nat Province – also showed that the introduction of mortgage was not followed by a hike in land foreclosure. Rather, it seems to have contributed to easing access to capital and limiting the loss of land. Mortgage foreclosure⁵⁵ represented only 0.02% of documented land in the 1975-1988 period, out of a rate of land transfer of 2.73. Rates of unredeemed *khai faak* were also less than 1% over the 1957-75 period.

Observing land trade in all environments and irrespective of the tenure type, together with wide informal money markets, Chalamwong and Feder (1986) also estimate that, there is “no reason to expect increased landlessness due to the granting of

⁵³ A customary arrangement in which ownership is transferred to the buyer, but with the agreement that the seller can redeem the land at a stipulated price within a specified period.

⁵⁴ These data, however, must be balanced by the suspicion that transfer by “gift” or “will” may embody a significant share of informal foreclosure.

⁵⁵ It is possible, however, that part of the transactions coming under the “land sale” (0.56%) and “land gift” (1.24) categories may have been forced by effective default in debts, but there is no data to fundament this hypothesis.

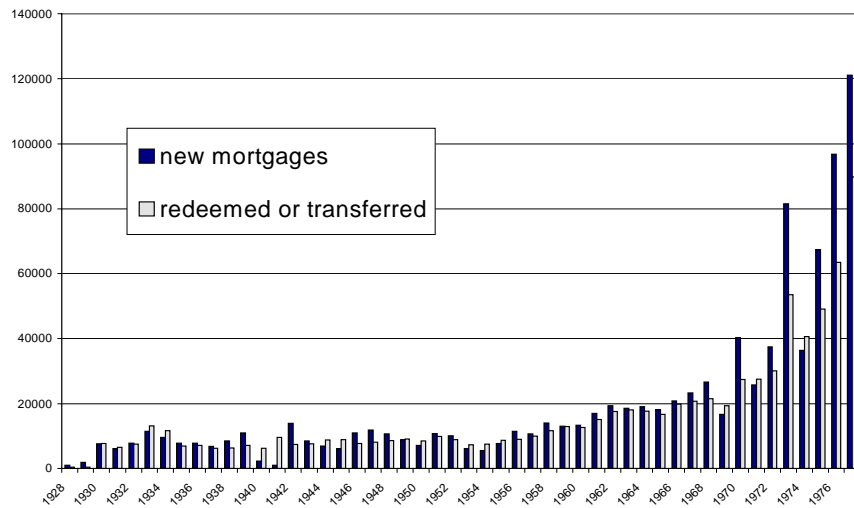
formal land rights to farmers who have already owned the land and cultivated it for many years”.

Fig. 10 provides the trend of official mortgage during this period for the whole country (Statistical Year Book, various issues). More than 90% of these land transfers are believed to refer to the Central Region (Chiengkul, 1983). These data do not provide a reliable picture of the intensity of mortgage because they concern only the land officially titled (*chanod*). However they serve as an indicator of trends and show that the early 70's obviously constitute a turning point in the use of mortgage to get credit from institutional sources. Over the 1915-1977 period, 8% of the 664,000 mortgages officially registered ended up in foreclosure.

We have no data on hand to size the magnitude of foreclosure further to commercial bank loans. Foreclosure appears to be extremely rare at present but it is difficult to assess to what extent some regular land sales are motivated by indebtedness or not. On-going field surveys convey the impression that commercial banks tend to roll on debts for many years before declaring foreclosure.

In retrospect, it is rather difficult to extract any commonality or mainstream trend from these fragmentary and often conflicting data. All these surveys are difficult to compare as they do not consider the same geographic areas. As for land tenure data, regional and provincial disparities are high, both in the absolute level of indebtedness, the conditions under which they have been contracted and the reasons/objectives of the loan (crop input, investment, consumption, payment of older debts, gambling, etc). In addition, indebtedness is not to be equated with precariousness and, sometimes, may on the contrary reflect a dynamic of investment. Qualitatively, however, there is little doubt that debts tend to be a constant burden on the back of many farmers, even though it does not necessarily ends up in foreclosure, and that times of crisis have come alongside increased indebtedness in the delta (see more on that in § 6.6.1).

FIG. 10: NUMBER OF MORTGAGES AND MORTGAGES REDEEMED (WHOLE COUNTRY)



Source: statistical yearbooks, several issues

2.5 Agricultural Intensification and diversification

The preceding discussion gave little room to agricultural production itself. Radical changes have nonetheless occurred in the last thirty years, drawing a new picture of the delta and redefining the scope of analysis (Kasetsart University and ORSTOM, 1996). The details and extent of these changes are beyond the scope of this paper but may be briefly summarised for the sake of our analysis.

A first set of significant transformations concern the physical infrastructure of the delta, radically modified by the implementation of the Chao Phraya Irrigation Project from the late 50's onward. Although the sixties were characterised by a sluggish transformation of agriculture production and productivity, raising much concern on the profitability of the investment and on the causes of such a low responsiveness (FAO, 1968), the seventies were more encouraging. The concomitant and much interrelated advents of High Yield Varieties, rice double cropping⁵⁶ and on-farm improvement together with drainage works in the upper delta, have allowed a quantitative leap in productivity. With improved plot and water conditions, transplanting could develop, based on the plentiful available labour. Gisselquist, for example, observes yields in the upper Ang Thong province shifting from 18 *thang/rai* in 1961, to 30 in 1966 and 35 in 1974 (one *thang* = 10 kg): with double-cropping, plot yields per year grew from 15 to 90 *thang/rai* ! In the 90's, the average productivity of

⁵⁶ Developing in larger scale after the construction of the Sirikit dam in 1974. However, limited available water resources and infrastructure constraints only allow to cultivate an average of 50% of the paddy land in the dry season.

HYVs is approximately 75-80 *thang/rai* (near 5 t/ha), or 150 *thang/rai* with double-cropping, a three-fold increase from yields observed with the first HYV planted in the rainy seasons of the early 70's.

A remaining part of 300,000 ha of deep water/floating rice cultivated in flood-prone low-lying areas lags behind in the process of intensification. Drainage improvements from 1965 onward and dike raising have, however, gradually stabilised production in these areas too (Molle et al. 1996). At the same time, the Mae Klong area was also progressively provided with irrigation facilities (1972-1992).

In addition to rice intensification, agricultural diversification gradually came out as a significant transformation process in the delta. Unfortunately, the 1963 census does not distinguish between rice and field crops and pools full rice growers together with farms growing rice *and* other crops. In the *rural delta*, the area cropped with non-rice crops increased from 19 to 26% between 1978 and 1993, while the proportion of farmers not growing rice⁵⁷ moved from 19 to 28%. During the same time, the share of farmers planting a non-rice crop (irrespective of whether they also grow rice or not) rose from 35 to 44%.

A major growth of orchards (with some vegetable) was observed in the Damnoen Saduak area, which gross area doubled between 1963 and 1995, from 50,000 ha to 100,000 ha. The North Rangsit area, too, witnessed a spread of orange-tree gardens fostered by Chinese farmers coming from Damnoen Saduak and Bangmod, most especially in the 1976-85 period (Saha, 1993).

Over the 10 provinces totally included in the delta, the share of non-rice crops shifted upward from 12% in 1975 to 23% in 1996, corresponding to an absolute area growth from 710,000 rai to 933,000 rai (while during the same time paddy land regressed from 5.2 to 3.0 million rai (from 88 to 77%) (OAE, yearbooks several issues).

In 1993, the government launched a 5 year programme (termed the "*Project of improvement of the agricultural production structure*") to support diversification away from rice and from three other upland crops. This policy was a response to declining real prices and water shortage (TDRI, 1995). It appeared that, in the Central plain, this process to diversify had already been initiated by the farmers themselves but that its pace was constrained by several factors (markets, credit, skill learning, water and soil conditions, reliability of the irrigation system, competition with off-farm opportunities).

In any case, crop diversification represents a mainstream and far-reaching process, aiming at reducing risk against price fluctuations and increasing income on a

⁵⁷ These include the sugar-cane growers of the Mae Klong area.

shrinking land through cash crops and high value-added productions such as aquaculture, vegetables, fruits, orchids, etc.

2.6 The land market

The *sakdina* system of the Ayutthaya period is known as a hierarchical system with ranking expressed in land units granted by the crown. While it seems that land grants were not systematically attached to these positions (Phongpaichit and Baker, 1997), there is no doubt that it was the control of manpower which laid at the core of power. The 19th century appears dominated by a struggle between the crown and nobility for the control of labour (Feeny, 1989; Phongpaichit and Baker, 1997; Prasertkul, 1989). In parallel with the gradual dismantling of corvée and the abolition of slavery enforced by Rama V, the growing economic opportunities offered by the cultivation and export of rice reinforced the economic value of land. Rising interest in land ownership created intense disputes which forced the government to establish a better system of property rights in land⁵⁸. In a widely cited letter to the King dated 1899, Prince Narathip observes that "*of all the enterprises in which Thais of good position can at the present invest their money, it is difficult to find any as promising as trading in land*". This is reflected in the multiplication of land prices by four on the East Bank area around 1899 (Johnston, 1975). Graham (1904) also comments that "*the only recognised means of investing money is, or was until the recent introduction of European Banking, the purchase of rice fields; the nobility is graded according to the (now purely nominal) grants of rice-land conferred by the King, dealing in rice and the ownership of rice-land are the causes of most of the civil litigation in the law courts, and the result of the last, or prospects of the next, rice harvest, make the most absorbing topic of conversation at all times*".

The price of land appreciated rapidly during the boom years, though its value varies according to sources (probably on account of the varied quality of land and quick changes in the market). From different records gathered by Johnston (1975) and Feeny (1982), we can take the 20-50 baht/*rai* bracket as the most common range of variation in the 1900-1905 period⁵⁹. Along the first half of the century, real prices show some ups and downs but remain relatively low (Feeny, 1982), as the expanding agricultural frontier limits the value of land. A dramatic slump is observed after the

⁵⁸ Again, it will not be attempted here to summarise numerous studies on that period and these changes: see, for example, Ingram, 1971; Ishii, 1978; Feeny, 1982; Feeny, 1989; Johnston, 1975; Manarungsan, 1989; Manopimoke, 1989.

⁵⁹ Comparing this range with the price of labour at the same time gives a measure of the scarcity of labour: daily wages in Rangsit were about 2 baht/day in 1905 and soared to 3 and up to 6 baht/day during the 1905-1912 recession, while the price of land was dropping by 50%.

1930 crisis, when land which could sell as high as 200 baht/*rai* in Ang Thong Province was purchased at 10 baht/*rai*! (Prince Burachat, 1932).

In the post-war period, the Chao Phraya Project implementation was responsible for a first hike in land prices around 1960. Montesano (1992) observes a boom of land transactions in *amphoe* Saphaya (Chai Nat province) during the 5 years preceding construction works. Between 1955 and 1961, the price of land in Chai Nat, in the north of the delta, rose from 360 baht/*rai* to 2,100 baht/*rai* (Resanond et al., 1962). In Ang Thong, this move was subsequent to the introduction of irrigation⁶⁰: Gisselquist (1977) reports that the period about 1962 to 1967 was a period of frequent sales, with the value of land increasing several fold.

Change in land prices during this period are also well documented by Hafner's study on the impact of road developments. Prices in Damnoen Saduak moved from 2000 baht/*rai* before 1957 to a plateau of around 12,000 baht/*rai* in the sixties, with a sharp increase in 1959-60. In Minburi, prices regularly soared from 1,000 baht in 1958 to 18,000 baht in 1967. In Saphaya, a dramatic change occurred in 1961-63, from 2,000 to 13,000 baht/*rai*. Other change include: 1,000 to 2,000 baht (1961-62) in Samchok; 1,000 to 6,000 baht in *amphoe* Chachoengsao (1959-62); 10,000 to 50,000 baht in Krathum Baen (1961-1967) and 4,000 to 13,000 baht from 1965 to 1967 in *amphoe* Lat Lum Kaeo.

Due to a tremendous increase of the demand for urban land, Thailand witnessed a land boom starting in the late 80's. With the rapid growth of prices, land turned out to be targeted by speculators as a profitable investment, much contributing to fuel the bubble property market and economy. While ALRO was purchasing land at 2,000 baht/*rai* in Nakhon Nayok Province in 1977, it had to pay 200,000 baht fifteen years later (Chirapanda, 1998)⁶¹. Land price in Bangkok and Samut Prakan increased by more than 200% during the 1987-90 period (Poapongsakom, 1992). Before the 1997 crisis, plain rice fields ("*thung*") in the delta would fetch around 40,000 baht/*rai*, while better plots with irrigation facilities were valued around 100,000 baht/*rai* or more. At the proximity of a main road or main canals, this price would increase two or threefold. Along highways such as the Asian road, common prices ranged between one to two million. Closer to Bangkok, in North Rangsit, the price of land in 1983 was less than 100,000 baht per *rai*. In 1988, it reached 500,000 baht along the inner canals but 1 million baht along canal 1 (near Rangsit-Wipawadi road). In 1993, the former reached 1 million but the price was still twice higher near canal 1 (Saha, 1993).

⁶⁰ Perhaps the anticipation observed in Saphaya is due to the visual proximity of the river and the dams which left no doubt on whether and how the water would be soon accessible.

The high price fetched by land has a significant impact on the land system. On the positive side, it hindered large farm operators in consolidating their farm by purchasing smaller ones. It also allowed some farmers to sell their land near the cities or main roads to buy larger areas in less valued areas. "Usually, farmers in the suburbs of Bangkok, Nonthaburi and Samut Prakan will move further away from the city if they are not too old to do farm work" (Poapongsakom, 1992). This was one of the rare instances, in recent times, in which land was bought for agricultural purposes in the delta⁶². Although several cases have been reported in different parts of the delta, there is no indication on the overall magnitude of this trend.

Interestingly, one may note that this process is nothing else than a repetition of phenomena observed since the beginning of the reclamation of the delta. At the beginning of the century, it was not uncommon for some farmers to sell their land in Bangkok's area and to move to the frontier. Similarly, Gisselquist (1977) reports that between 1947 and 1955, new comers from Suphan Buri acquired land in Ang Thong province: they would sell seven rai of deep-water flood land in Suphan Buri and buy 100 rai of rainfed land in Ang Thong. This process is continuously at work within the delta and between the delta and the upland. Another example is provided by the Chinese orchard growers who moved from Damnoen Saduak and Bangmod areas to Rangsit, north of Bangkok. In the early 70's, selling one rai in Damnoen Saduak allowed them to buy ten rai in Rangsit (Saha, 1993).

Some farmers also clear their debts by selling only a portion of their land. The advent of the economic crisis showed that benefits and risks were shared: not rare are ageing farmers with no child to take over their farm who wish land prices were still as high as before ! Meaningful are the case of Bangkok based investors⁶³ who are now after farmers to lease the several hundreds of rai that they bought and wish they could sell back...In these cases, farmers benefited from the rise in land prices.

On the negative side, skyrocketing prices prevented small farmers from buying more land. This may have dangerously undermined the traditional process through which young farmers inheriting divided land, rent additional plots, try to accumulate in order to later buy more land to pass on to their children. This "family cycle", which ensures a certain stability to the land system and to the reproduction of agricultural units, is dramatically cut by the fact that farmers are unable to buy additional plots. It remains

⁶¹ In Lop Buri province, the price of land in 1985 for the irrigated lowland, with title: 5,100 baht/rai (3,000 in uplands); without title: 3,300 baht/rai (Chalamwong and Feder, 1986)

⁶² Pramuanratkarn's study of Pakret in the seventies, once a suburb of Bangkok, shows that farmers may also in majority take advantage of the rising price of their land to sell it gradually in a transient process from farm to urban activities. Forty two percent of the farmers were found to have invested and joined the capitalist sector, with another 33% engaged in the bazaar economy.

⁶³ Like in the Phak Hai Project (West of Ayutthaya).

to be seen whether the sole rental market can perform this role. Most of the cases of land sale still observed are farmers buying a small plot for highly intensive production (orchids, shrimps) or housing.

This situation gives free way to urban capitalistic and speculative groups to acquire large chunks of land. Unfortunately, no study assessing the extent to which this has already happened is available. Qualitative statements from local officers in the delta suggest that this process is dramatically advanced in some sub-areas, while still limited in others. The surroundings of Ayutthaya (especially the southern part) are said to be sold out to extremely high levels (80%). In areas with more intensive agriculture, the situation is varied. It is said to be worrying in areas such as the surroundings districts of Nakhon Pathom or Suphan Buri⁶⁴.

Contrary to other countries where capital from outside is invested in land from which significant agricultural land rent might be obtained (as was the case at the beginning of the century), leaving small-scale owner-operators in places where marginal return is small and possibly giving way to large farms (Ramsson, 1977), land in the delta is acquired by companies or individuals who have no intention to develop agricultural activities⁶⁵. In fact, in parallel to the mechanism mentioned above of farmers selling valuable land and moving further to buy larger holdings, the growth of Bangkok into the estates of the nobility acquired more than one century ago generates a centrifugal move of capital investments into the delta. After selling their land at astronomical prices, these landlords often reinvest their capital in other parts of the delta (and other regions).

With the total dissociation of the price of land from the economic return it can yield through rice-growing⁶⁶, the land market excludes the proper farmers from buying land and entices them to sell it out. This contributes to draining landownership out of the rural area, as symbolised by these numerous farmers who now rent their former land from these new landlords⁶⁷.

⁶⁴ Extensionists from Don Chedi district, for example, estimate that land of the irrigated area has been sold to urban absentee investors to a level of 30%.

⁶⁵ Some exceptions can be mentioned: development of large units of chicken production, shrimp ponds, orchards: in the latter case, however, the urban owners plant fruit trees and employ local farmers to manage the orchards.

⁶⁶ Chalamwong and Feder (1986) note that "most authors adopt a simple [economic] model whereby land price is the discounted sum of expected net income from land", which is obviously inappropriate in our case. They also show in their study "that the divergence between the nominal cost of credit and the opportunity cost of capital will cause the equilibrium price of titled land to be higher than the social value of benefits generated by a unit of such land". This only accounts for a very limited portion of the land price distortion.

⁶⁷ It is all the most common that selling land to absentee non-farmers is accompanied by an agreement that the former owner will be able to continue as tenant, sometimes with no time limit. see also (Kemp, 1992): "When a creditor takes possession of land given as security for the debt, he usually continues to permit the former owner to farm it in return for a specified quantity of rice. Alternatively, a debtor may sell the land in order to pay the debt and at the same time arrange to rent it from the purchaser".

3 A qualitative framework of analysis

Keeping in mind the processes described in the 6 sections of the preceding chapter (see corresponding shaded rectangles in Fig. 11), we may now turn to an overall framework of analysis of their linkages within the Central Plain agrarian system, with a mention of several categories of farmers relevant to our concern (see Fig. 11 for a schematic representation).

3.1 Stocks of agricultural holdings and farm land

1/ The first “stock” (see bold rectangles) in play is the stock of **agricultural holdings (farms)**. Their number is bound to *increase* under the process of land division brought about by the inter-generational turnover. This, process, in its turn, is directly linked to demographic variables: positively to women fertility, first; negatively to average life expectancy (delayed land turnover), to the rate of single and to the average age at marriage (decrease or delay of the recomposition of holdings at marriage), but also to migration.

On the other hand, the number of holdings is *decreased* by the disappearance of some holdings. Typically, this relates to the economic failure of some farms and to older farmers with no descendants to take over their farm and who give up agriculture. Their land is often sold to local or absentee owners (who are not considered as agricultural households).

2/ The second stock is the stock of **agricultural land**. This stock may be expanded by the clearing of new virgin land (land frontier). It may also shrink – possibly at the same time, but in different areas – because of urban growth and because of transformations in land use (roads, sand pits, recreational areas, etc.). In the delta, land expansion has long come to an end and the most significant phenomena is that of *the regression of the land frontier*, with considerable loss of land every year (see § 2.1).

The remaining stock of agricultural land is apportioned between the different agricultural holdings. This repartition is subject of concern regarding its distributive pattern among holdings (*equity*), while the ratio to the total number of holdings provides another key parameter: the *average farm size*.

The repartition is subject to two antagonist processes. The first one tends to *fragment* land through inheritance, with the aggravating factor of the traditional custom of partible inheritance. The second one tends to *concentrate* land in larger holdings. This is being achieved either through land *purchase* or by *renting in* additional land,

in particular for the purposes expressed by the *family cycle*. This process, in its turn depends on the available land for rent, that is the relative share of the total agricultural land that (some) owners agree to lease. This share, itself, is the final result of an extremely intricate balance in which intervene numerous and varied parameters: the percentage of land owned by absentee owners, the terms of tenancy contracts, which define the economic return and the risk for each actor, the available other opportunities (intensification, pluri-activity, migration, etc) as compared to increasing the farmed land area through renting, etc.

Land fragmentation is bound by economic constraints which define – in terms of average farm area - a reproduction level under which the holding is not sustainable. This level is often site specific and may greatly vary depending on the possibility of intensification and diversification. These possibilities, in turn, are strongly governed by physical parameters (irrigation, water quality, soil, topography, climate,..) and the availability of labour, capital and markets. The decreasing profitability of small(er) farms is a push factor towards intensification and diversification.

Land concentration, too, at least within a logic of agricultural production, is constrained or limited by several factors. Mechanisation, with its capital requirements, the relative prices of land and rents, the availability of wage labour, etc. are among contributing factors.

3.2 Significant categories of land holders

This quite generic picture can be complemented by a few qualitative mentions of some main categories of households (round-corner rectangles in Fig. 11).

- a) The high level of out-migration and lower fertility have reduced the average family size and depleted the younger strata of the population pyramid. As a result, it is extremely common to meet farmers who, although still formally heads of holding, are too old to cultivate by themselves. These *inactive farmers* fully rely on wage labourers and contractors for land preparation, spraying and harvesting.
- b) A second type is the *all-leasing holder*. This holder is owner of some land but decides to lease it entirely to other farmers. This type can be an evolution of the former (old) inactive farmer, who gives up the burden of arranging farm activities and contents himself with the land rent. The *all-leasing holder*, in general, has other sources of revenue and can afford to lease his land. Under that category also come younger farmers who are discouraged with the level of income they can draw from farming their (possibly limited) land and who chose to engage in other occupations (work in some nearby factory or in other non-agricultural activity) and lease their land, thus combining two sources of income. However, they still live in the farm compound and still own some land nearby.

A second category are those who have inherited land from their parents but chose to leave the village to migrate to urban centres or have activities in nearby cities (teacher, policeman, shopkeeper, mechanic, truck driver, etc) and can be considered as absentee all-leasing holders. Very often these people lease their land to relatives, sometimes for free.

The word *holder* is used here as opposed to *landlord* (see below) to recall their origin and to stress their historical link with both the land they rent out and the community.

- c) A third type includes landless farmers who do not rent land, or wage labourers. They may have bottomed down to this status after indebtedness and subsequent loss of land, often as a result of non sustainable small scale farming in fragmented land (*debt-ridden farmer*). They may also be simply descendant of landless people (see earlier analysis of this category).
- d) Another significant type is a further stage of the *old inactive or of the all-leasing holder* who decides to *give up* agriculture for some reason, often because he has no descendent or because none of his children is interested in continuing this activity. Often attracted by high sale prices, he sells his land, sometimes in successive parts, and may present his children with cash at the time of inheritance.
- e) Last are the local and absentee landlords. They are also of different types: A first category refers to the historical consequence of the distribution/acquisition of land by the nobility and the crown at the turn of the century. This still accounts for the existence of large private holdings, mostly in the provinces surrounding Bangkok. A second category is made up by Bangkok-based speculators (individual or companies) which have invested in the land for purely speculative reasons or with the objective to develop real estates, factories, sand pits, etc. A third and last category includes local merchants, middlemen, teachers, money lenders or civil servants who – often taking advantage of their position – have accumulated some land. They may reside in the province capital, in smaller cities or even in the village.

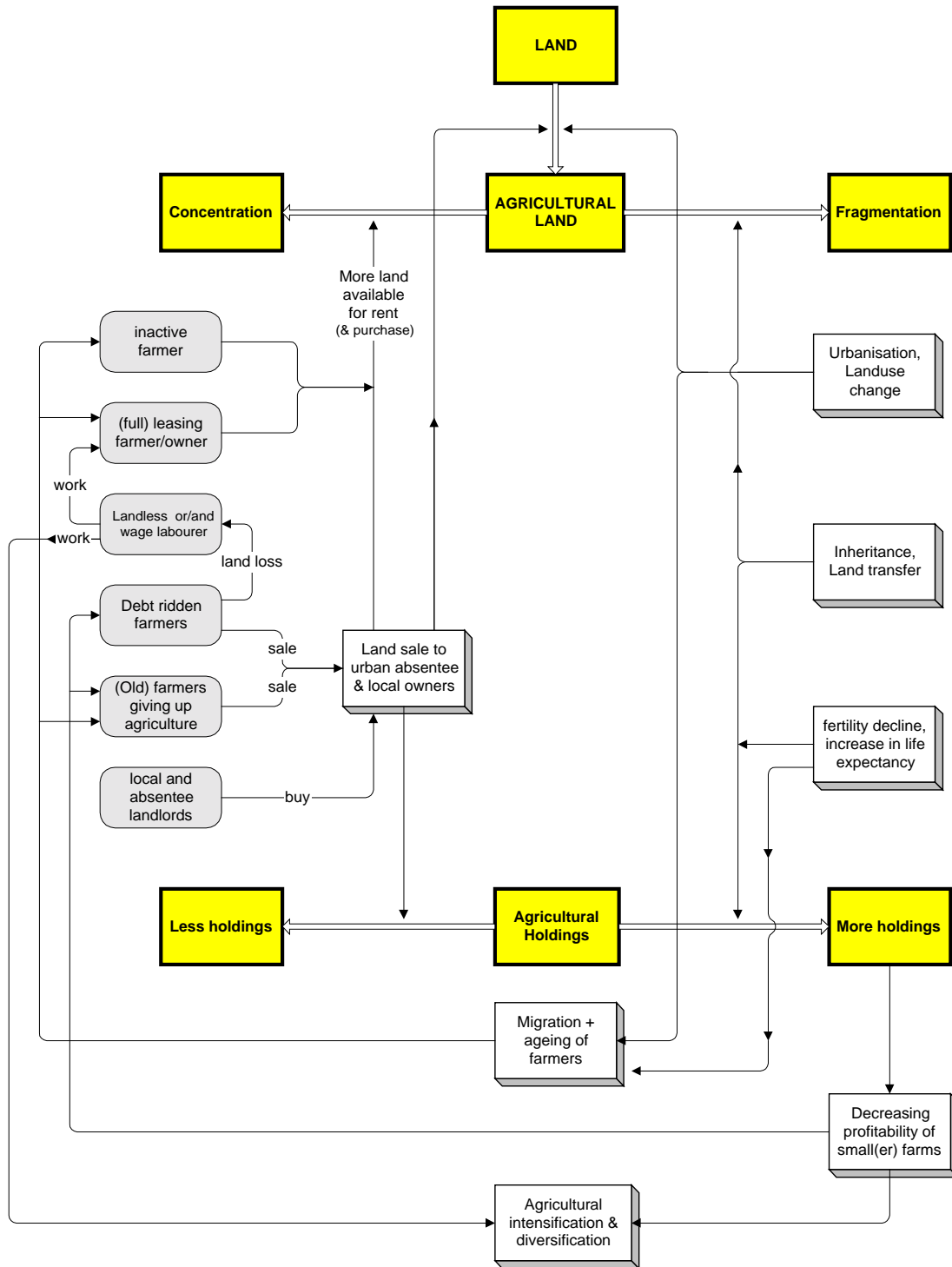
It is worth noting that the holders of type (b) are not considered any longer as agricultural holders in the censuses, because they are not engaged anymore in agriculture, and sometimes do not even reside in the village. Together with absentee landlords (e), who differ from them to the extent that they have no personal kinship relation with the village, they contribute to maintaining the stock of land available for rent.

Those of the agricultural *wage labourers* who have sold their land (former debt-ridden farmers) (c) join ex-farmers of the (d) type in that they make land available for purchasers, either local farmers or absentee landlords, the latter being by far the most common in the last 15 years. Wage labourers (if they do not move out of the agricultural sector), provide labour to *inactive farmers (a)* and to farms in a process of intensification or diversification. They also generally combine their revenue with other non-agricultural incomes.

Apart from these categories, which deserve special mention because of their role in the evolution of the land system and because they are numerically significant, other “*normal*” farmers buy, rent and sell land in varied amounts and transfer it to their descendants, whose burden is to maintain, or enlarge, or intensify the farm in order to achieve further sustainability.

This setting suffices to evidence the complexity of the antagonistic processes at work in the definition and constant recomposition of the land system. Intuitively, we may hypothesise that different sets of parameters, defining the intensity of all these processes, are likely to lead to extremely contrasting overall evolutions. The next section is dedicated to substantiating quantitatively the evolution of the key parameters and variables.

FIG. 11: SCHEMATICAL REPRESENTATION OF THE MAIN INTERRELATED FACTORS GOVERNING THE EVOLUTION OF THE LAND SYSTEM



4 Main quantitative changes in the land system

4.1 Change in the number of farms

For all of the 6 provinces considered, the number of farms is on the rise during the 1950-63 interval, with a rate of 100% for Suphan Buri (upland frontier) and an average rate of 20% for the other provinces. This well reflects both the demographic saturation of that period and the cultivation of marginal lands. The overall growth for the subsequent 30 years is only 7%, but if Suphan Buri, with its expansion towards uplands, is disregarded, we obtain on the contrary a *reduction of 5% of the total number of farms*. Table 8 shows that, in fact, this average trend varies according to the province: Ang Thong and Sing Buri experience an increase in the number of farms (+5% and +3% respectively), while the three more urbanised provinces (Pathum Thani, Nakhon Pathom and Ayutthaya) undergo a net decrease, especially the latter (- 13%).

TABLE 8: EVOLUTION OF THE TOTAL NUMBER OF FARMS, BY PROVINCE

Province	1950	1963	1978	1993	1993/50	93/63	% year
Ayutthaya	36,875	44,037	42,258	38,462	1.04	0.87	-0.45
Ang Thong	20,329	25,039	25,640	26,208	1.29	1.05	0.15
Pathum Thani	17,388	19,695	19,625	17,711	1.02	0.90	-0.35
Sing Buri	15,671	18,841	20,049	19,500	1.24	1.03	0.11
Suphan Buri	31,452	63,895	73,931	85,495	2.72	1.34	0.98
Nakhon Pathom	35,972	44,078	41,056	42,274	1.18	0.96	-0.14
Total	157,687	215,585	222,559	229,650	1.46	1.07	0.21
Total – Suphan Buri	126,235	151,690	148,628	144,155	1.14	0.95	-0.17

Source: Population and agricultural censuses (respective issues)

These considerations, however, deal with average values and do not tell the whole story. It is necessary to have a closer look at the distribution of farms according to size class.

Fig. 13 is quite illuminating in revealing the change in the number of farms for each size class (5 provinces). It also specifies these variations for each inter-census

period, 1950-1963, 1963-78 and 1978-93⁶⁸. The 1950-63 period differs from other periods in that all size classes are numerically on the rise. On the contrary, the two following periods are marked by a surge of small(er) holdings, with areas lower than 15 rai while, on the other hand, larger holdings are depleted.

Fig. 15 proposes a more drastic and complementary reading in terms of total farm area by class. It reveals how the increase in total farm land of the 1950-63 period has predominantly benefited larger farms: this does not mean that these farms have absorbed the new land brought under cultivation but that the overall redistribution process shows both a pattern of land concentration in some larger farms (> 30 rai) and a rise of small farms, possibly losing land because of inheritance division and/or forced land sale. The component of land concentration, however, appears radically reversed in the two later intervals: farms over 30 rai (and, notably, farms between 60 and 100 rai) have provided most of the land corresponding to the surge of the small holdings. To put it another way, these small holdings probably originate from the division of the larger ones (either by inheritance or by land sale). An extremely interesting phenomena also appears in the last upper range: the area farmed by holdings over 140 rai has been on the rise during the 78-93 period. A total of 90,000 rai has been transferred to this category, showing that there is an embryonic development of (very) large farms. Data by *changwat* reveal that 140,000 rai should be added to this category if Suphan Buri Province was added: the trend is much larger in the upland. All the provinces, to a lesser or greater extent, show a positive trend on that range, especially Sing Buri and Pathum Thani.

Also of great significance is the fact that the absolute number of these farms over 140 rai is declining (from 872 in 1963, to 588 in 1993, for the 5 inner *changwat*). This means that the average size of these farms has boomed up, from 189 to 352 rai.

Given the significance of these data, we have also charted the same variables for the 1963-1978 and 1978-1993 intervals, but with a more detailed division of size classes, as allowed by the 3 censuses. This gives Fig. 14 and Fig. 15.

⁶⁸ The size classes in the three census are not exactly the same and some interpolations between some classes have been necessary in order to allow their comparison. This may have generated slight distortions between adjacent classes but does not affect the trends evidenced in the charts. In addition, the lower limit of farm size is 1 rai in the 1950 census, whereas it is taken as 2 rai in the following censuses. Therefore, the growth of the farms under 2 rai between 1950 and 1963 is underrated (although it already appears quite considerable).

FIG. 12: CHANGE IN THE TOTAL NUMBER OF FARMS, BY FARM SIZE CLASS AND 3 INTER-CENSUS PERIODS

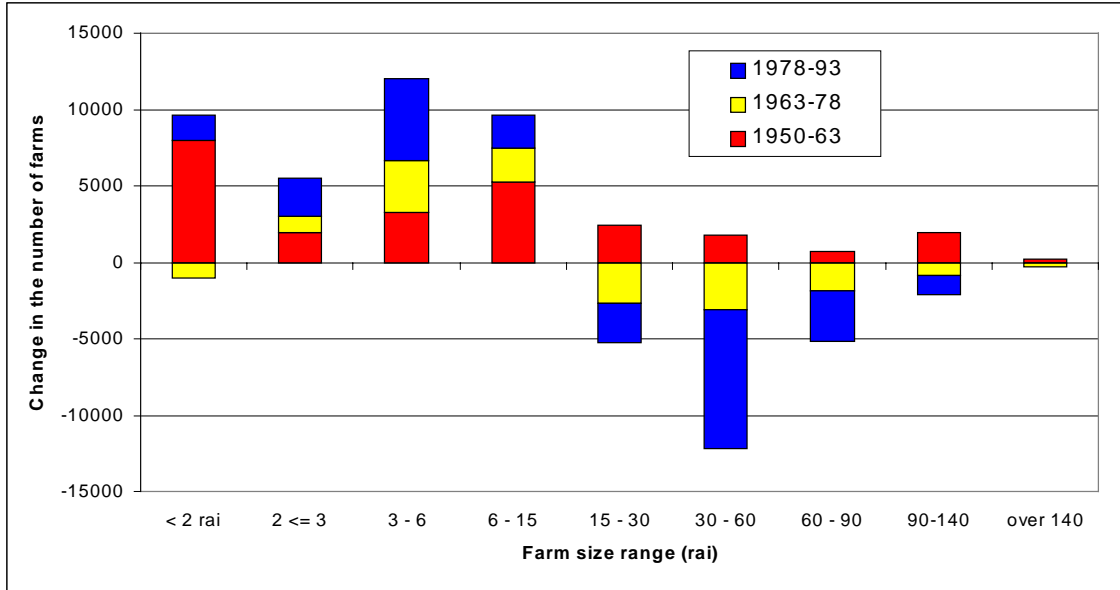


FIG. 13: CHANGE IN THE TOTAL FARM AREA, BY SIZE CLASS AND 3 INTER-CENSUS PERIODS (5 PROVINCES)

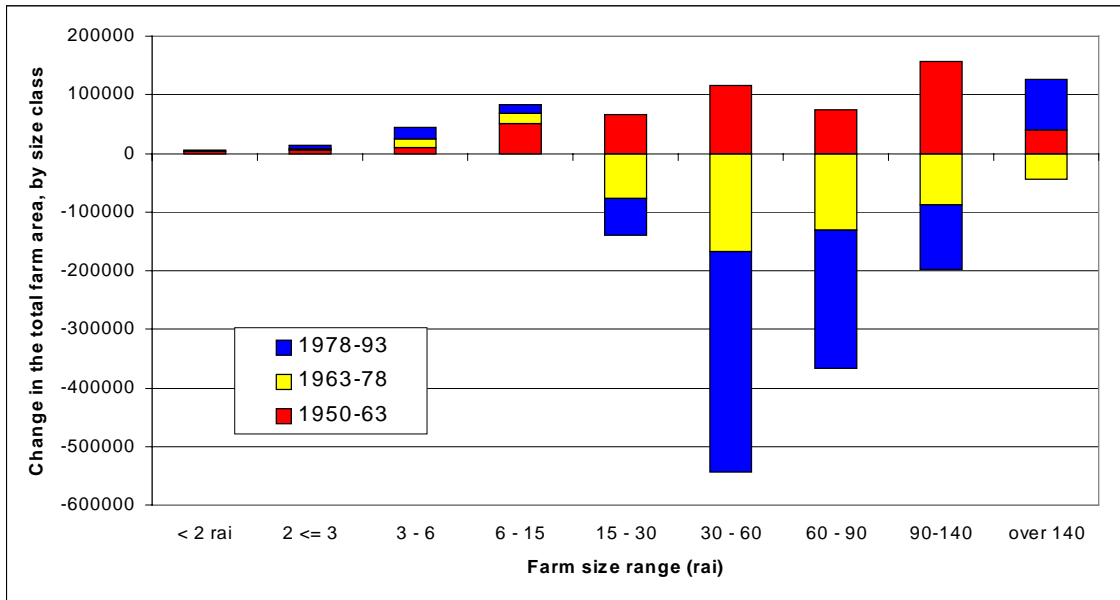


FIG. 14: CHANGE IN THE TOTAL NUMBER OF FARMS, BY FARM SIZE CLASS AND 2 INTER-CENSUS PERIODS

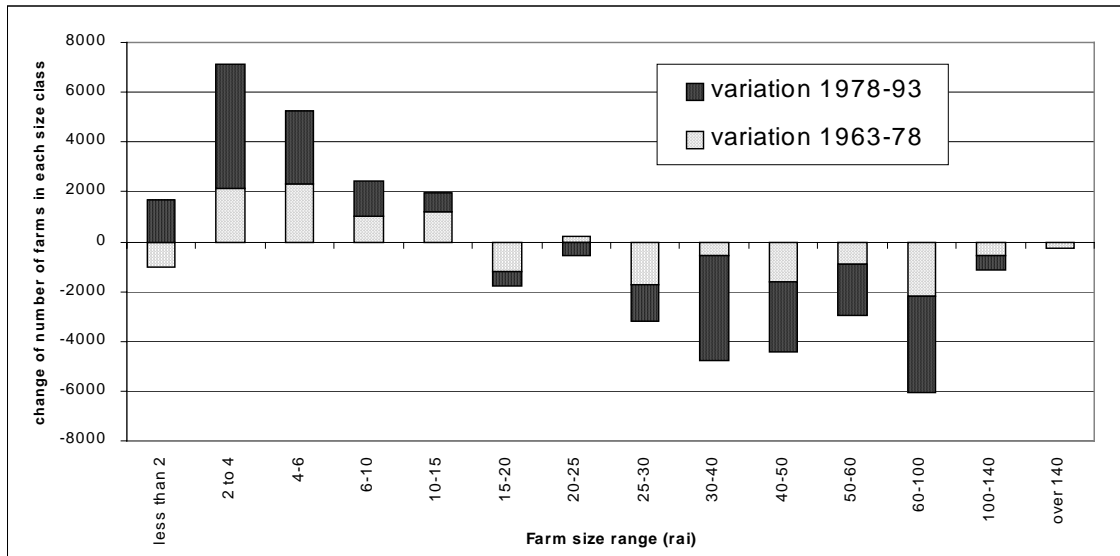


FIG. 15: CHANGE IN THE TOTAL FARM AREA, BY SIZE CLASS AND 2 INTER-CENSUS PERIODS (5 PROVINCES)

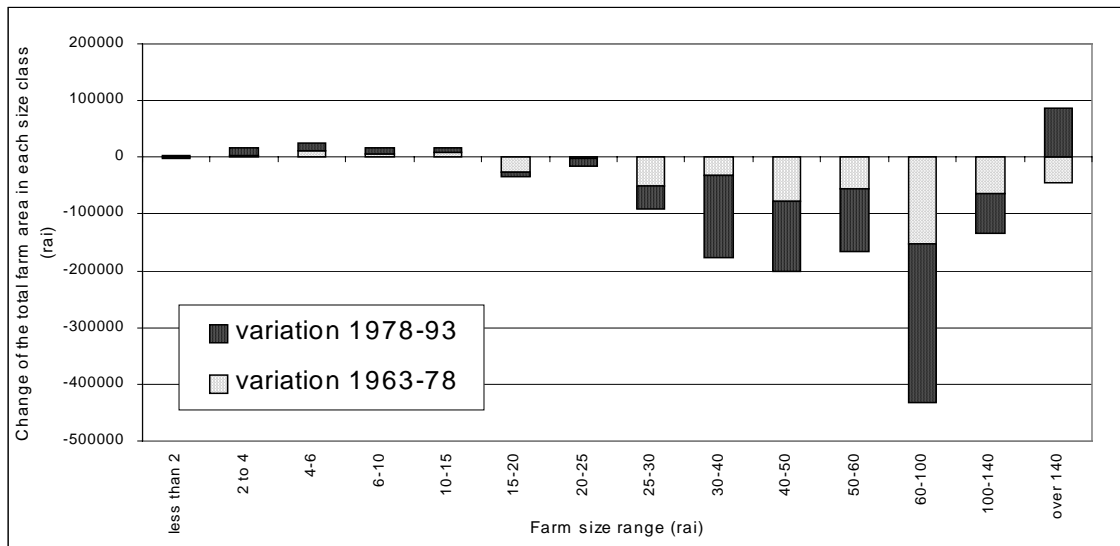


Fig. 16 complements the reading of these charts with the distribution of the absolute number of farms by size class for the 5 “inner” *changwat*⁶⁹. The main phenomena is the boom of the “under 6 rai” class, while all other experience a slight decrease, in line with diminution of the agricultural land.

⁶⁹ If we adjoin Suphan Buri, the decline in the 6-15 range is reversed, while the evolution of the 15-30 class is stable.

The distribution of holdings by farm size class is rather different *for each changwat* and deserves to be specified for each of them (see charts in Annexe 2). Ayutthaya differs from other provinces in that no (or a very limited) increase of the smaller farms is registered. This obviously reflects the fact that the agro-ecological conditions do not allow more fragmentation of these holdings. Pathum Thani has lost many of its large holdings (> 60 rai). Nakhon Pathom (diversification), Ang Thong and Sing Buri show a farm distribution with a high number of small farms. Although parts of these last two provinces have notably intensified their agriculture, the trend is worrying as their population density is high. Suphan Buri still has a large share of medium farms (upland areas) but its irrigated part is also undergoing fragmentation.

The overall distribution of the holdings and the corresponding areas by size class in 1993 are given in Annexe 4. The corresponding cumulated percentages are shown in Fig. 17. Farms under 20 rai make up 60% of the total holdings but cover only 21% of the total farm area. The 10% larger farms (over 40 rai), on the other hand, correspond to 36% of the total farm land.

Fig. 18 plots the cumulated percentages of both the number of farms and their corresponding areas for the three censuses, and reveals that the change in farm size distribution commented earlier resulted in an overall worsening of the distributional pattern. This can be seen from the fact that the curve gradually strays from the diagonal, especially during the 1950-63 and 1978-93 periods. The Gini indice, computed for the four years, yields values of 0.41, 0.46, 0.47 and 0.52 respectively.

While the curves relative to 1963 and 1978 little differ, the neat change in 1950-1963 is due to the increase in larger farms (to which goes most of the increase in cultivated land). This points out to a growing pattern of inequality. The change of the 1978-1993 interval is mostly due to the increase of farms in the 0-6 rai range, which shifts the curve to the right. To what extent income disparities are associated with these gradual increase of the Gini⁷⁰ indice is not readily available. Land productivity must be taken into account and some small holdings which engaged in cash crop production in the 1978-93 interval are better off than bigger ones with rice monoculture.

⁷⁰ which measures the total area between the diagonal and the curve, the unit being the half rectangle representing the worst possible distribution.

FIG. 16: THE DISTRIBUTION OF THE ABSOLUTE NUMBER OF FARMS BY SIZE CLASS (5 CHANGWAT)

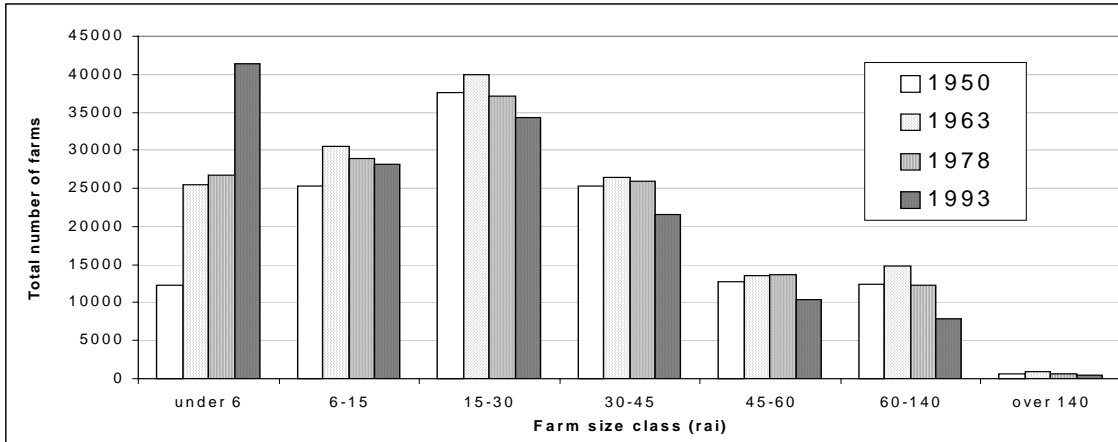


FIG. 17: CUMULATED % OF THE NUMBER OF FARM AND CORRESPONDING AREA IN 1993

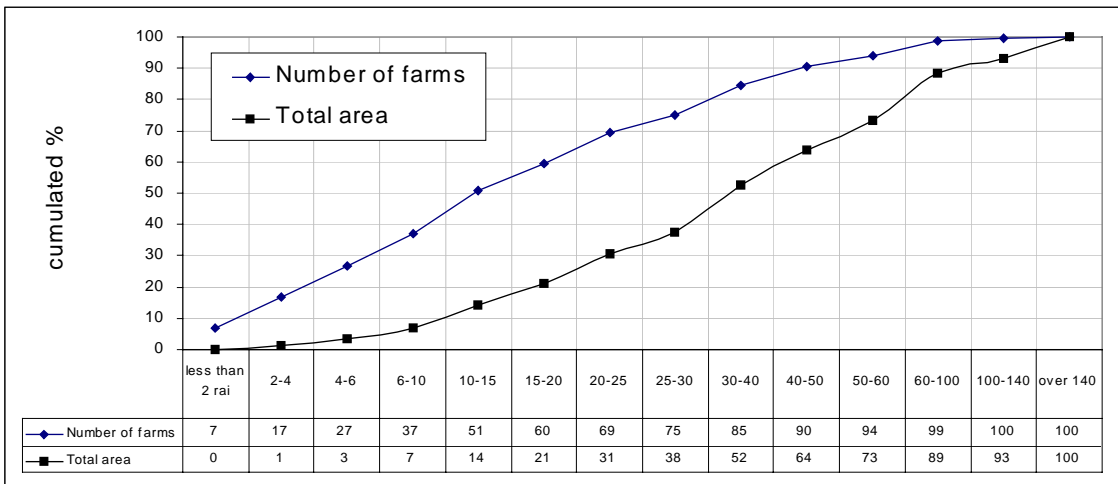
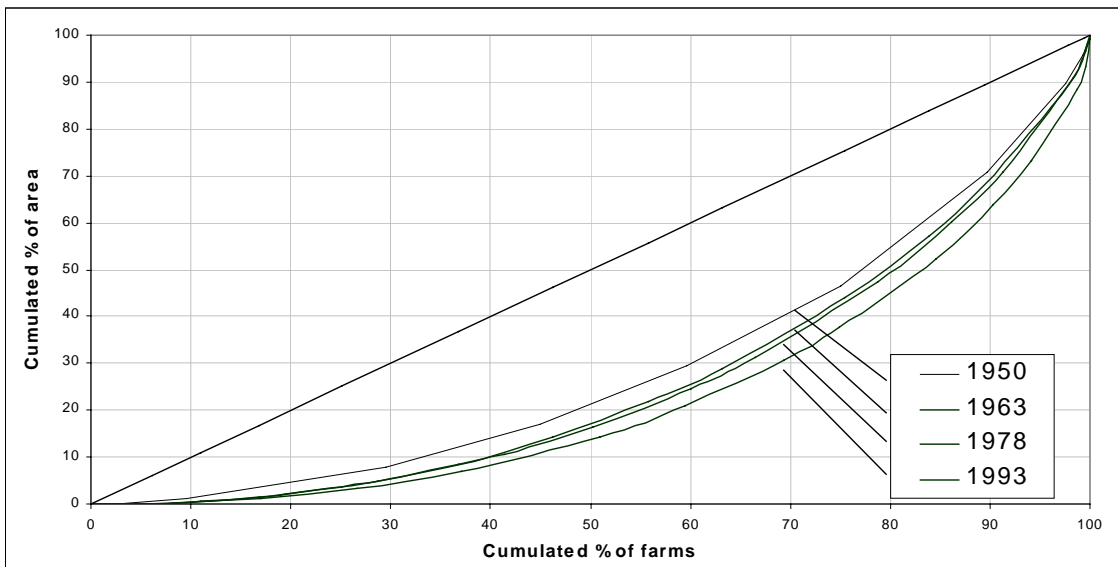


FIG. 18: CUMULATED % OF THE NUMBER OF FARM AND CORRESPONDING AREA IN 1950, 1963, 1978, 1993



Last, Table 9 provides the values of the Gini index for each of the 6 provinces and highlights, again, the less skewed distribution of farm land in Ayutthaya Province. Corresponding Gini curves are in Annexe 5.

TABLE 9: GINI INDEX BY PROVINCE (1993 CENSUS)

Province	Nakhon Pathom	Suphan Buri	Sing Buri	Ayutthaya	Ang Thong	Pathum Thani
Gini index	0.56	0.51	0.54	0.47	0.51	0.52

4.2 Evolution of rice-growing farms

The data presented above refer to all the farms, irrespective of their land use. This section will provide a close-up on farms growing rice, either alone or in association with other crops.

Fig. 19 first displays the net gain/loss of each size class for both types of farms between 1978 and 1993: in all classes, mono-rice growers have undergone a severe cut, a few of them obviously shifting to the “mixed” category, which shows net gains for all categories under 30 rai.

FIG. 19: EVOLUTION OF RICE FARMS, BY SIZE CLASS (1978-93)

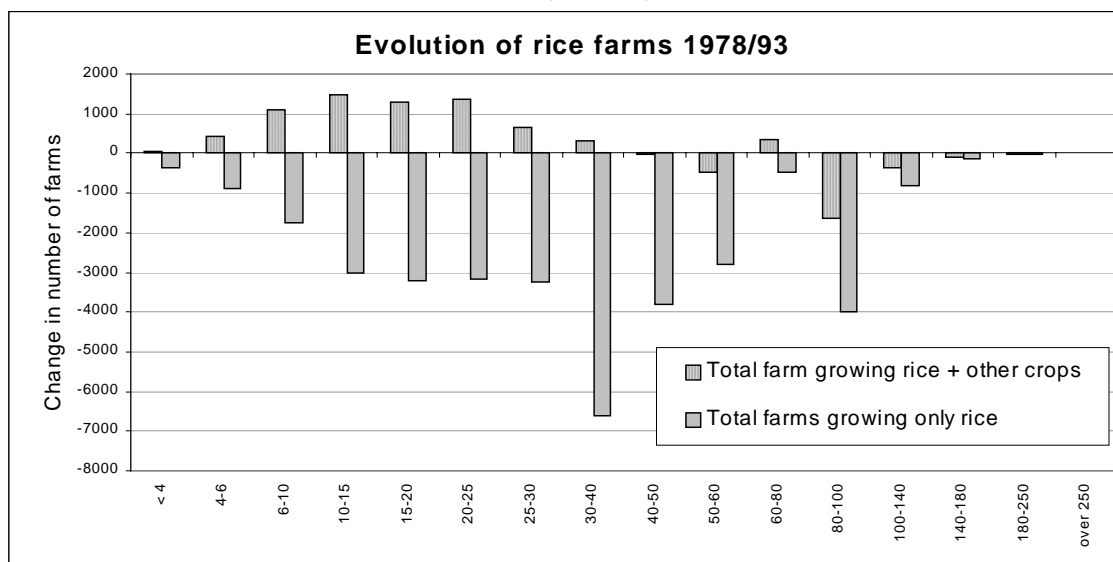


Fig. 20 reveals that on a longer time span (63-93), the ratio of the number of farms growing rice decreases more than the index given for the total farms. For the 0-6 rai class, however, the slight increase (ratio > 1) is much lower than for the total farms, showing that the increase in small farms chiefly relates to non-rice growing farms.

This is an important point as it smoothes the vision of poverty associated with very small holdings. This information is specified by province in Table 10. The evolution of the share made up by all farms growing rice shows a decline initiated since 1937 (96%), with an acceleration between 1963 and 1993, with the notable exception of Ayutthaya. While the shift was well initiated in the 1963-78 period for Pathum Thani (peri-urban vegetables and orchards) and even much earlier in Nakhon Pathom, the trend in the 1978-93 period also markedly affects Ang Thong and Sing Buri. The last two columns reveal, on the contrary, that holdings growing rice with other crops are on the rise during the last inter-census period. This complements the overall picture and allows one to state that both mixed farms and farms diversifying out of rice are increasing at the expense of mono-rice farms. This last point is shown on Fig. 20 (right chart) which points out to a reduction of rice mono-cropping farms affecting all class-sizes without exception.

FIG. 20: EVOLUTION OF RICE FARMS AND MONO-RICE CROPPING FARMS

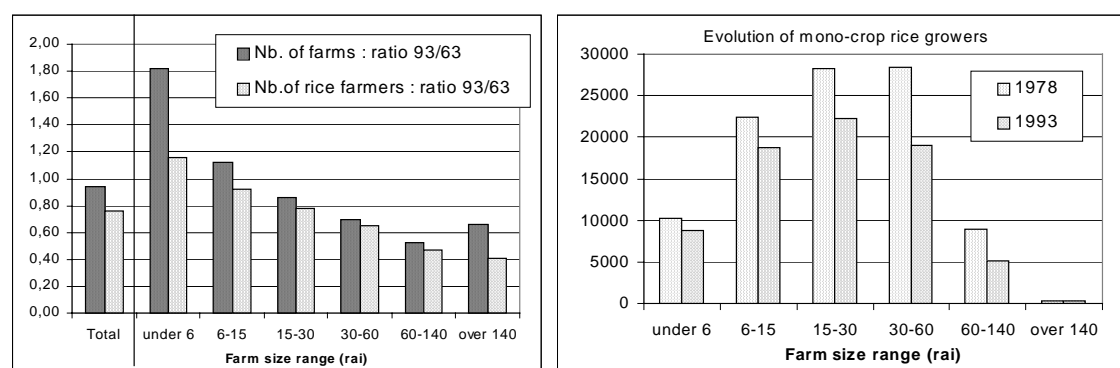


TABLE 10: EVOLUTION OF THE PERCENTAGE OF FARMS GROWING RICE

Province	All farms growing rice					Farms with only rice		Rice/mixed farms	
	% total 1937	% total 1947	% total 1963	% total 1978	% total 1993	% total 1978	% total 1993	% total 1978	% total 1993
Ayutthaya	98	97	95	96	91	88	79	8	12
Ang Thong	98	96	94	93	79	79	55	14	24
Pathum Thani	94	95	93	78	64	64	48	14	18
Sing Buri	97	95	95	95	84	81	65	14	19
Suphan Buri	95	91		72	67	66	47	6	20
Nakhon Pathom	96	81	79	61	46	41	31	20	15
Total	96	92	90	84	70	68	52	16	18

Source: Population and Agricultural Censuses (respective issues)

4.3 Evolution of the average farm area

The average farm size, at the macro level, is a useful indicator of the overall division of the land, similar to the land/man ratio. In socio-economic terms, however, it appears much less pertinent as it gives no idea of the variability of farm size, nor does it constitute any indicator of income without related information on crop and land use intensity.

Data on farm size prior to the middle of the current century are scant. Zimmerman's survey in 1930 is too fragmentary to derive a clear picture of that question. It is believed that the average farm size has increased until 1930 (Feeny, 1982), when saturation became sensible in some parts of the delta. Table 11 reveals the gradual trend which has affected all provinces since 1950, giving an overall decrease from *30.1 to 22.1 rai between 1950 and 1993*. Venturing into extrapolating the data of the recent 1998 intercensal survey of agriculture, which reports a further decrease of 11.6% between 1993 and 1998 (from 24.13 to 21.34 rai *for the Central region*), we may hypothesise that the average farm size in 2000 is nearing 20 rai.

Regarding the 1963-93 period, the slight decrease of the number of farms (5%) combined with the overall decrease of the total farm land (- 26%, or 16% if Suphan Buri is considered, see earlier section), translates into varied evolutions of the average farm size (Table 11). However, all trends are downwards. This shows that even Provinces with a clear decrease in the number of farms also undergo an even more drastic decline of farm land. Pathum Thani, although presenting a decrease of 26%, is still noticeable for its higher average farm size which is due to its specific historical pattern of land occupation. Ang Thong and Sing Buri are the most alarming provinces, with a decline of approximately 20%. Nakhon Pathom scores even lower but this rate goes alongside a significant trend towards diversified production farmed on smaller land. Although it has upland reserve, Suphan Buri does not succeed in compensating the strong fragmentation observed in the irrigated part.

This significant decline of the average farm size, however, has been counterbalanced by the increase in cropping intensity (development of dry-season irrigated crops), of labour-intensive cash productions (diversification) and overall pluri-activity, which contributes to tempering the seriousness of the situation and, often, probably offsets the economic impact of the average farm size decrease. It is worth noting, too, that if the total *rural delta* is considered (set of *amphoe*), the decrease in farm size appears of lesser magnitude, *from 28 to 24 rai between 1963 and 1993, showing that division is more advanced in the core delta* (our 6 provinces).

TABLE 11: EVOLUTION OF THE AVERAGE FARM AREA, BY PROVINCE (ON RAI)

Province	1937	1950	1963	1978	1993	93/63	% year
Ayutthaya	30.5	29.8	31.4	30.0	27.2	0.87	-0.48
Ang Thong	21.3	21.8	19.8	19.7	16.0	0.81	-0.71
Pathum Thani	47.7	45.9	42.1	38.3	31.3	0.74	-0.98
Sing Buri	25.7	24.8	23.4	18.5	18.4	0.79	-0.79
Suphan Buri	26.4	29.1	29.0	26.3	23.5	0.81	-0.70
Nakhon Pathom	25.4	25.7	23.5	19.8	15.9	0.68	-1.29
Total	29.5	30.1	28.0	25.4	22.1	0.79	-0.79

Source: Population and agricultural censuses (respective issues)

In order to specify the evolution of the average farm size for farms growing only rice, Table 12 displays the values by *changwat*. Notwithstanding Pathum Thani, which undergoes a severe fragmentation, the erosion of these farms is limited but always positive, with the exception of Sing Buri. This is due to the consolidation of some very large farms in this province (see later section). Pathum Thani aside, the reduction in average farm size is less severe for rice mono-croppers than for other farms.

TABLE 12: EVOLUTION OF THE MONO-RICE-GROWING AVERAGE FARM AREA, BY PROVINCE (IN RAI)

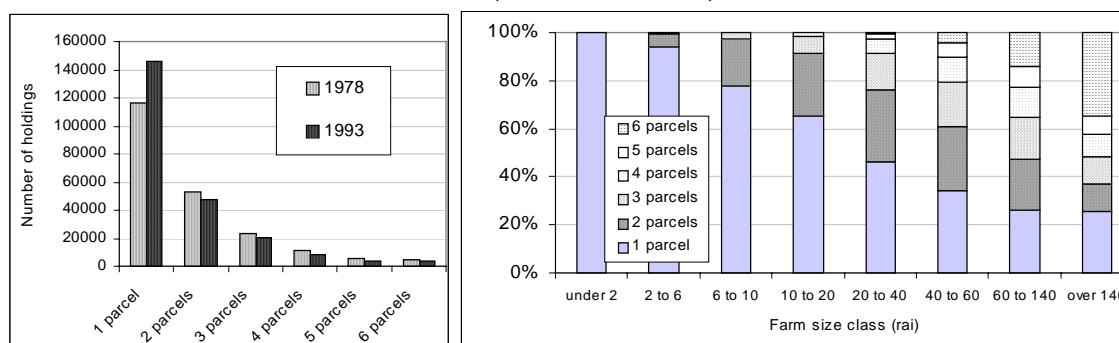
Province	1978	1993
Ayutthaya	31.8	29.5
Ang Thong	20.7	18.3
Pathum Thani	38.6	28.8
Sing Buri	19.8	20.8
Suphan Buri	24.7	
Nakhon Pathom	25.2	23.3
Total –Suphan	28	25

Source: Population and agricultural censuses (respective issues)

4.4 Plot fragmentation

Contrarily to expectations, the average number of plots per farm has been declining since the post-war period. Zimmerman's estimates in 1930 gives an average of 1.64 but this value sharply rises to 2.6 in 1953 (Ministry of Agriculture, 1953). It was found as low as 1.83 in 1978 and further declined, with a value of 1.64 in 1993⁷¹, in line with the augmentation of small farms, most of which have only one parcel (Fig. 21).

FIG. 21: STATISTICS OF PLOT FRAGMENTATION (6 PROVINCES, 1993)



Source: Agricultural Census 1978 and 1993

⁷¹ Ayutthaya, Ang Thong and Singburi have values slightly higher than the average, while Pathum Thani is the least fragmented. All values for 1993 are smaller than 2.

5 Change in land ownership and patterns of land tenure

The preceding section provides information on the size of the holdings but not on the corresponding land tenure conditions. In the above discussion, a farm, or a holding, may be operated by its owner or by a tenant; a farmer may operate owned or rented land, and may also lease some. The analysis must therefore be deepened in order to assess whether and how the change in farm size is related to tenure conditions.

Land tenure studies in Thailand have been marred by the inconsistency of the variables adopted, since the first surveys of Zimmerman in 1930 (Sternstein, 1967; Wagstaff, 1970). The four main censuses in consideration here unfortunately allow limited insight on tenure issues. One of the main flaws is that the 1963 census does not distinguish between (full)owners and owner-tenants. In addition, full tenants are divided between cash-renters and crop-renters (tenants paying their rent in kind) but those renting land on both systems or on a free basis come under the “other” category. Fortunately, this shortcoming is partly compensated for by data from a survey carried out in 1967/68 on the 26 rice-growing provinces of the central region (DLD, 1969). In some cases, earlier data will also be called up for the analysis.

5.1 Percentages of different tenure types

Tenancy in the delta dates back as soon as the late XIXth century, when urban landlords (crown, nobility, high-ranking officials) – further to the gradual emancipation of their serves and dependants -, had to rely increasingly on tenants and/or wage labourers to farm the large domains that they had acquired. This becomes prominent from 1868 onward in the Rangsit area but also applies to other large scale areas opened by the digging of other canals, most often located on the East Bank (Tanabe, 1978). Estimates for Rangsit in the 1910's put the area owned by large landowners at 81% of the total (Manopimoke, 1989), while Zimmerman (1931) found (in villages of Thanyaburi) a share of rented land as high as 95.5%. Apart from these areas of the lower delta comprising most of the East Bank (Pathum Thani, Nakhon Nayok, Chachoengsao, Samut Prakan) and of the lower West Bank, tenancy was not an issue as land was available and the grip of urban capitalists was negligible. This readily defines three contrasting agrarian systems in the delta: the area of older settlements, which matches most of the *flood-prone area* around Ayutthaya cultivated with floating rice; the *landlord area* and what has been termed the “*silent frontier*”,

reclaimed little by little by peasants⁷².

The decade centred on WWII is a time of much dislocations and adjustments (see next section). A first survey on the total rice-farmers of the Central Plain in 1967-68 provides details on the distribution of farms according to land tenure status: full-owner, tenant/owner, full tenant. It can be used for comparison with later censuses with little bias, thus compensating for the 1963 census, because the distributions of farms according to land tenure for all farms and for rice-growers only differ by less than 2% (Wagstaff, 1970). Fig. 22 presents the evolution of land tenure types in 1967, 1973, 1975, 1978 and 1993 for our 5 provinces (Suphan Buri excluded because of its specific pattern).

It is worth noting that the share given by the 1963 census (for the same 5 *changwat*) is only 15%, a drastic difference from the share of 33% reported in 1967: there is a wide suspicion that the 1963 census⁷³ underrates the percentage of tenants (Ingram, 1971; Mehl, 1981⁷⁴), one of the reason being the abnormal magnitude of the “other” category which – among others – includes full tenants who rent plots on both cash and crop sharing arrangements. If the “other” category is added to the “full tenant” (with a single type of rental arrangement), then the share of the latter rises to 25%. Because of their inaccuracy, these data are not shown on the figure.

The 1973 data (OAE, 1975) appear somewhat dubious in that full tenancy rates are much lower than in other surveys. Data from DLD cited by Ramsay (1982) for the year 1975 (1974-76) and available for three of our provinces (Table 13) confirm the bias attached to these data.

It appears that, much contrarily to expectation, the percentage of full owners has gradually increased over the 30 years span, from around 40% to 61%. The percentages of full tenants undergo a drastic decrease from one third in 1967 to less than one fourth in the last decade. Last, the significant proportion of owner/tenants in the early 70's is reduced to 16% in 1993.

Ingram has computed the share of full tenants for the years 1937, 1950, 1963 (underrated) and 1967 for the 26 provinces of the 1967 survey and obtained shares

⁷² This division is made here for the sake of simplification. In fact, some landlord areas could also be found near Ratburi or Nakhon Chaisi, while the East Bank was also partly reclaimed by peasants. The area of older historical settlement also included some higher land where transplanting was practised.

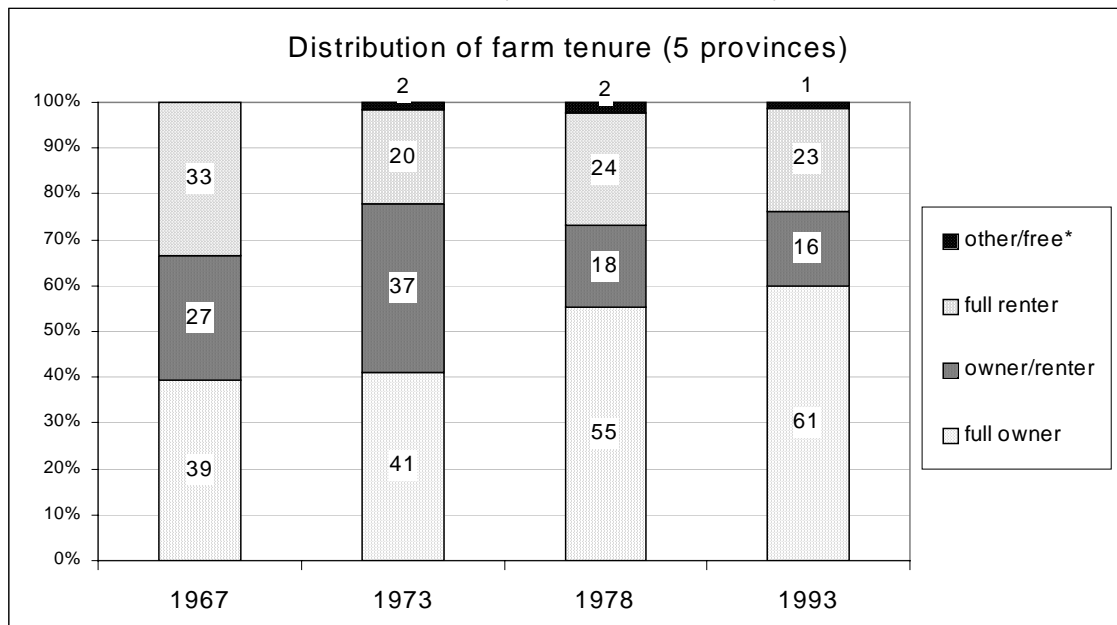
⁷³ The accuracy of the 1973 data could also be put under scrutiny: the consistency evidenced in the following section on the share of tenanted land, however, supports the hypothesis that these data are correct.

⁷⁴ Comparing the rates of (full) tenancy given in the 1963 census and in the 1964 survey (Chaiyong et al. [n. d.]) on the same set of provinces Mehl obtains rates of 12.5 and 22.5% respectively. Even considering the missing tenants renting on both cash and crop share arrangements of the 1963 census, the difference cannot be fully accounted for.

of 26.7%, 15.6%, 9.9% and 22.5% respectively, showing that the post-war period is characterised by a low level of full-tenancy. It is believed that post-war disturbances, skyrocketing prices in 1947 and, later, the expansion of the upland frontier, have reduced the proportion of full tenants.

Data from a survey in five provinces of central Thailand in 1964 (Chaiyong et al. n.d.), show a distribution of holdings between “full-owner”, “owner/tenant”, “tenants” and “others” of 41, 29, 27 and 3% respectively (Tomosugi, 1969), which is quite consistent with the 1967 data. Unfortunately, the report only provides the data aggregated for the 5 provinces.

FIG. 22: DISTRIBUTION OF FARM TENURE TYPES (SUPHAN BURI EXCLUDED)



* the other/free category for the year 1973 corresponds to free rentals

If we now look at the data at the *changwat* level, we are once again struck by the diversity of situations (see Annexe 3). It appears that the late 60's have witnessed a maximum in the percentage of full tenants, which have been declining hitherto. The rise of full-owners is all the more spectacular in all provinces since 1973⁷⁵, except Nakhon Pathom, where there is a 2.5% decrease between the last two censuses. This goes alongside a squeeze of the owner/renter category, now reduced to less than 19% in all provinces except Ayutthaya (23%). Almost 3,000 full-tenants have

⁷⁵ The data for 73/74 also bear (in small letters), for information, the percentage of area rented free. It must not be included when comparing with the later censuses. For the 1978 census, people using land free (usually from relatives) are in the “other” category. It is probably also the case in the 1993 census but no specific mention of this is given. The rate of “free renting” is believed to have significantly declined.

disappeared from Pathum Thani, a spectacular reversal of the historical prevalence of tenancy in this province.

This population most probably corresponds to the newly urbanised areas, which was both historically in the hands of urban families and subject to speculation, therefore tenanted, while the relative weight of the farms bought by orchard growers who moved into the area is sharpened (see § 2.5).

TABLE 13: FULL OWNERS AND FULL TENANTS, IN TOTAL NUMBER OF HOLDINGS AND PERCENTAGES

	1963	1967		1973		1975	1978			1993		
	Full* Tenants	Full owners	Full Tenants	Full owners	Full Tenants	Full Tenants	Total	Full owners	Full tenants	Total	Full Owners	Full Tenants
Ayutthaya	<i>In % (12)</i>	27	37	23	20 ⁺¹	26	42258	16616	12070	38462	17071	12050
								39	29		45	32
Ang Thong	<i>In % (3)</i>	53	19	48	7 ⁺²	14	25640	15901	3851	26208	17262	3670
								62	15		66	14
Pathum Thani	<i>In % (40)</i>	23	61	14	59 ⁺²	60	19625	6130	11114	17711	8993	6830
								31	57		51	39
Sing Buri	<i>In % (2)</i>	56	19	58	10 ⁺⁵	-	20049	13679	2711	19500	13555	2533
								68	14		70	13
Suphan Buri	<i>In % (7)</i>	60	18	66	6 ⁺¹	-	73931	37353	10626	85495	49942	12802
								51	14		65	17
Nakhon Pathom	<i>In % (19)</i>	47	31	61	16 ⁺¹	-	41056	29987	6564	42274	29564	7474
								73	16		71	18
Total	<i>In % (13)</i>	45	29	49	15 ⁺¹	-	222559	119666	46936	229650	136387	45359
								54	21		62	21
Total – Suphan	<i>In % (15)</i>	39	33	41	20⁺²	-	148628	82313	36310	144155	86445	32557
								55	24		61	23

* "Full tenants" in 1963 do not include holdings with rented plots paid in both shared or fixed (cash or kind) rents; the totals are therefore underrated.

Sources: Population and agricultural censuses (respective issues); DLD 1967; data for 1973: OAE (1975); data for 1974-1976 (noted 1975), taken from Ramsay, 1982.

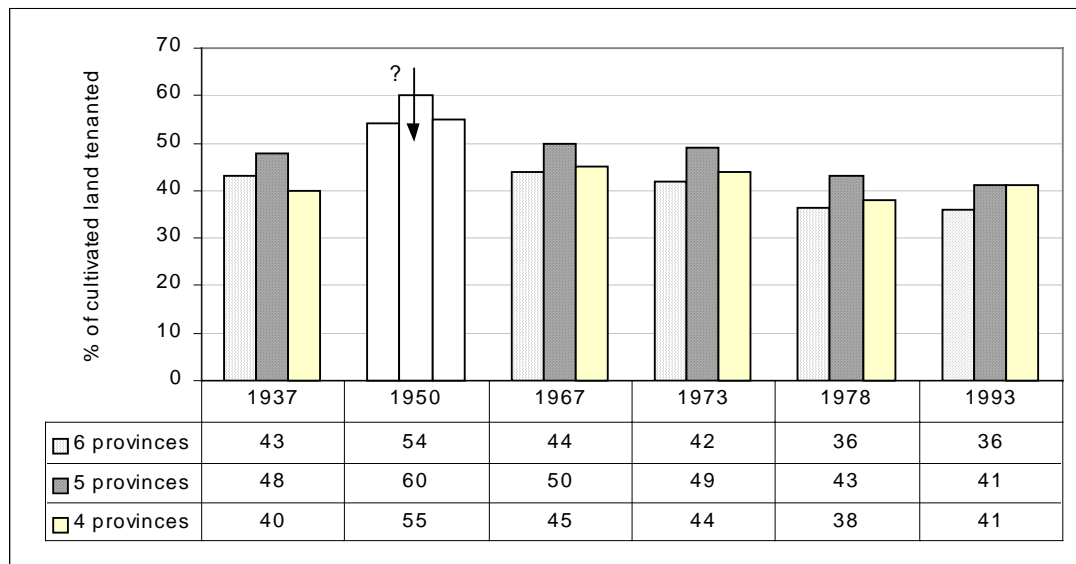
5.2 Change in tenanted farm land

Another way to measure the incidence of tenancy is to look at the share of the total farm land which is operated by their owners or by tenants. Fig. 23 shows the overall evolution for the 1937 – 1993 period.

Values for 1937 have been estimated⁷⁶; values for 1950 are probably overrated⁷⁷ but in any instance serve to show that tenancy was already widespread at that time. This is, however, in contradiction with the 1947 Population census, which shows very low levels of tenancy. Data for this census are not shown here because it bears obvious inconsistencies⁷⁸.

It appears that for our sets of 6 or 5 provinces the share of tenanted land is slightly declining since the sixties (and even possibly before). The current share of tenanted land (not considering Suphan Buri) is around 40%.

FIG. 23: EVOLUTION OF THE PERCENTAGE OF THE FARMLAND TENANTED (% OF TOTAL FARM LAND)



We may also consider these evolutions at the *changwat* level (Table 14, see figures in Annexe 7). For all the provinces without exception the share of tenanted land significantly decreased during the 1973-78 period. This may be associated with the period of intensification (double-cropping, spread of HYV) which made many farmers get their land back to operate it by themselves. In line with the perspective of attractive profits, land tends to be farmed by owners and tenancy decreases.

⁷⁶ Data on the area of the mixed (owner/tenant) farms do not specify the respective shares of owned and rented land. Based on later data, which show that these two parts are of the same order of magnitude, half of the total area has been attributed to each of the two categories.

⁷⁷ The values indicated here are (100% - % of land cultivated by the owner), this last variable provided by Behrman (1968): unfortunately, the authors were unable to locate the full set of leaflets of this census, despite extensive search. It is not known if the census considers other categories (e.g "rent free", "mortgage", etc) apart from "land cultivated by the owner" and "land cultivated by tenants". If this is the case, our values must be decreased by a same amount.

⁷⁸ See Table 14. Data for some provinces (notably Ayutthaya and Pathum Thani) are totally unreliable. Even the total cultivated area ascribed to these provinces is only a small portion of the 1937 value. The census has not been carried out exhaustively but no mention of this point could be found in the original.

Table 14 also reveals that the impact of the drastic decrease of the tenanted land in Pathum Thani over the 1978-1993 period *offsets the rise of approximately 3-4% in the other changwats* (see charts in the Annexe 7). In fact, the apparent levelling off of the tenanted land over the last two censuses *conceals a growth* of approximately 3-4% in all provinces but Pathum Thani. This is why we also plotted the evolution of the set of the 4 provinces obtained after removing Pathum Thani. This slight growth can be ascribed to a growing supply of land for rent (see interpretation in Chapter 7).

The most striking point of the table, however, is that by and large the rates of tenanted land observed in the 1930's⁷⁹ did not vary that much during the remaining part of the century !

Although data on land tenure coming from sources other than the censuses are of poor quality, sometimes showing considerable year-to-year fluctuations, yearly evolutions for each province and for the 1975-1991 period are shown in Annexe 8. The curve corresponding to the total of the six provinces shows a slight decrease in the early 80's, consistent with the depressed rice prices of that period, and an ensuing rise in the second half of the decade.

TABLE 14: PERCENTAGE OF TOTAL FARMED AREA OPERATED BY TENANTS (BY CHANGWAT)

Province	1930*	1937**	1947**	1950	1957 [#]	1967	1973	1978	1993
Ayutthaya	(42)	50	[15 ?]	68-	(47)	55	59	51	54
Sing Buri		28	26	39-		32	29	28	31
Ang Thong		30	31	45-	(36)	33	34	29	34
Pathum Thani	(68)	72	[14 ?]	78-	(59)	68	74	64	44
Nakhon Pathom		40	37	51-		42	36	27	31
Suphan Buri	(8)	26	27	30-	(31)	28	29	23	28
Total		43		54-		44	42	36	36
Total-Suphan		48		60-		50	49	43	41

(*): from Zimmerman (1931), on limited samples; (**): from Population Censuses; 1937 data are estimated assuming that mixed farms have, on average, 50% rented and 50% owned: see footnote note 76. ([#]) from Uthit Naksawat (1961: in Tomosugi, 1969), the only set of data derived from a limited sample; other data from Agricultural Censuses.

⁷⁹ This gives the opportunity to comment the data derived from Zimmerman's survey in 1930, in particular the well known "36%" rate of tenanted land in the Central Region widely cited in the literature. "In this study all classes of people were included because in an undifferentiated society it is possible to tell who is a farmer and who is not. Except in the Central Plains, where the differentiation has proceeded a little more than in other districts, it may be said that everyone farms a little and everyone does a little of something else. Even this applies largely to Central Siam". Consequently the 50 families sampled in each village include landless families which "were merchants, shopkeepers and laborers, some were well-to-do and some were poor".

In addition, the total cultivated average area is calculated for the whole village land, and reported to the whole population, including landless (and non-farmers); this tends to show that effective average cultivated areas by family were higher than the values provided in the table. The "number of people renting some land" of the table "Land rented by family" is not clearly defined and regardless of whether it is understood as an absolute number (on a sample of 50 families) or as a percentage it is incompatible with the table giving the average land by tenure an by family.

To get a clearer spatial vision of the situation in recent times, Fig. 24 shows the share of tenanted land in 1993. Not surprisingly, the East Bank is almost totally⁸⁰ over 45%, together with the banks of the Pasak river and the south of Suphan Buri. Tenanted land is lower than 30% in the Mae Klong area and in the upper delta, between the Noi and Tha Chin river. If we consider the tenanted area for the *rural delta* shown on the map, we obtain an overall value of 37%, 41% for the Vicinity and 65% for the remaining agricultural areas of Bangkok (86,000 ha). Corresponding estimates⁸¹ for the three zones are 34%, 59% and 53% for 1978; 41%, 61% and 61% for 1967. In summary, *the rural delta had 41% of his land tenanted in 1967 but this share declined during the seventies to reach 34% in 1978; it later took an upward trend, with a value of 37% in 1993.*

A spatial vision of changes occurred during this later period (1978-1993) is provided by the map of Annexe 11. It reveals three distinct areas: a decrease near Bangkok, an increase in the most distant western side of the delta, and stability in between.

5.3 Average farm size and land tenure

Translated in terms of average size of holding, the opposite trends in the number of full-owners and the area they farm entail a significant decrease of the average farm size of this category (from 19.4 to 15.4 rai). Since 1963, full tenants undergo a similar process (but they farm a larger area), while both the owned and rented areas farmed by owner-tenants are rather stable (Fig. 25). If we examine the corresponding data from the 67-68 survey on rice farms, we find values of 25.2, 29.2, 20 and 20.8 rai for the 4 categories. The value for full owners' farms (25.2 rai) is much higher than the value in 1978 (19 rai) but the latter also includes non-rice growing farms which are in general much smaller than rice-growing ones. Therefore the comparison is not fully relevant.

Full owners undergo the highest cut of (average) area but it may well have been offset by the intensification which occurred during the same period. Full renters farm larger areas and it can be hypothesised that the difference with full owners is linked to the necessity to farm larger areas to achieve sustainability (as the payment of rents decreases the per rai income). It is also pushed upward by the larger full-tenant farms of Pathum Thani and Ayutthaya. The interpretation of these changes will be discussed in the last chapter.

⁸⁰ With the exception of the area growing orange trees which is predominantly owner-operated (see chapter 2).

⁸¹ For 1967 only the percentage by province are given. These values have been weighted by areas of agricultural land as in 1963. For 1978, data by amphoe do not specify the shares of owned and tenanted land of mixed owners. These shares have been derived from data at the provincial level (45% of owned land, 55% of tenanted land for our 5 provinces).

FIG. 24: TENANTED LAND IN THE DELTA (1993)

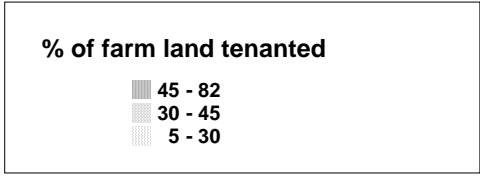
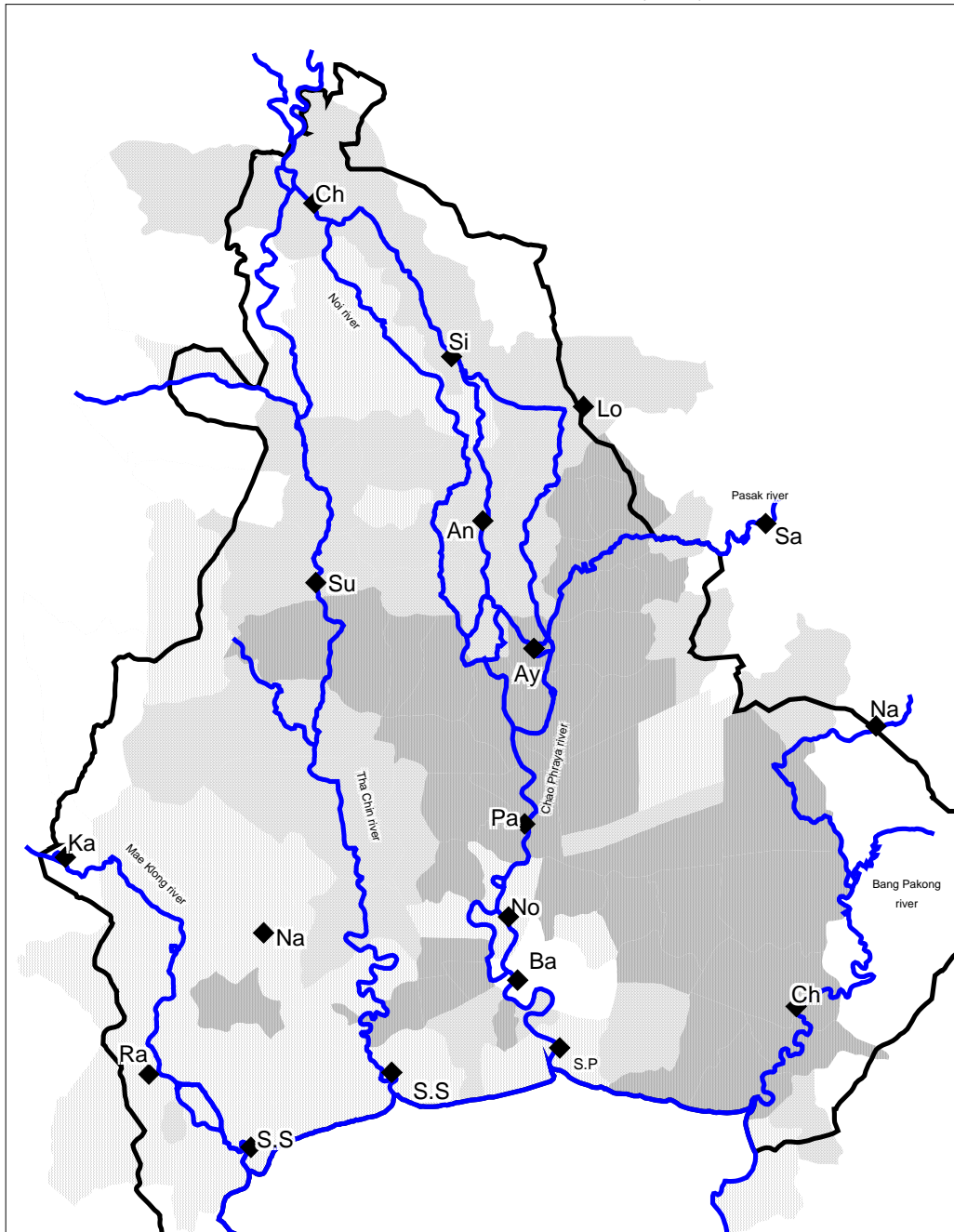
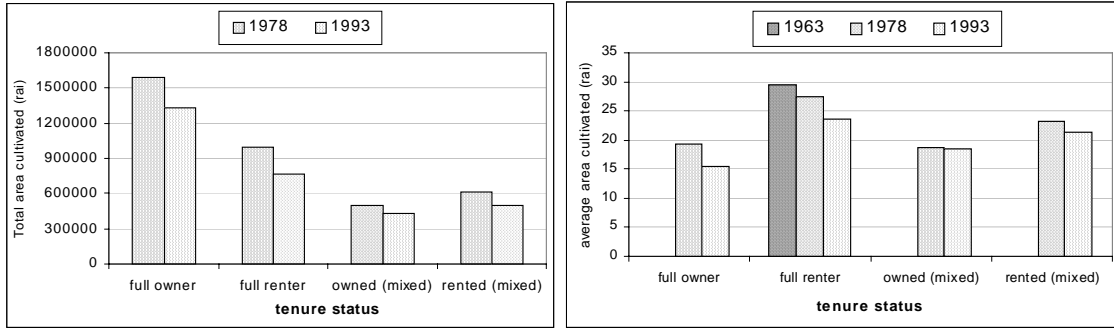


FIG. 25: CHANGE IN THE AREAS FARMED UNDER DIFFERENT TENURES



Details by *changwat* bring about some interesting complements. Table 15 shows that the full-tenants farm area does not decrease, with the exception of Pathum Thani (encroachment of urban growth) and Nakhon Pathom (viability of smaller farms because of diversification). Full owners are more affected, the least in Ayutthaya, where agro-ecological conditions do not permit drastic cuts in an already very low value around 20 rai. Ang Thong, which also has a large share of deep-water rice area, appears as the most worrying *changwat*, with a decrease from 17.8 to 12.3 rai. Many of these full owners are probably ageing farmers with other sources of revenue.

Owner/tenant farmers fare higher, with an overall average of 40 rai, and correspond to farmers which are in a position to make rice-farming profitable. Noteworthy is the exception of Nakhon Pathom: the total average area of these farmers, very high in 1978, has been divided by three. This is, at least in part, a direct consequence of the disappearing of deep-water cultivation in the southern part of the province and of the rise of many small farms engaged in diversification.

TABLE 15: EVOLUTION OF AVERAGE FARM SIZE, BY LAND TENURE TYPE

	Full owner			full renter			Owner/renter (mixed)					
							owned part			rented part		
	1967*	1978	1993	1967*	1978	1993	1967*	1978	1993	1967*	1978	1993
Ayutthaya	28	21.7	18.5	27	27.5	27.6	21	18.8	17.8	23	24.0	25.8
Ang Thong	19	17.8	12.3	15	16.1	16.5	14	12.6	12.7	14	14.9	16.2
Pathum Thani	45	34.3	24.9	44	37.0	28.7	31	25.4	49.0	31	30.8	26.6
Sing Buri	23	16.3	13.9	21	18.7	20.0	17	12.9	17.7	16	15.4	19.2
Suphan Buri	28	34.0	19.4	22	20.2	20.5	21	20.6	19.6	19	19.3	20.8
Nak. Pathom	23	17.2	13.3	23	21.5	17.4	22	43.3	15.1	20	49.2	17.7
Total	26	23.9	16.9	28	25.8	22.7	20	19.4	18.9	20	21.9	21.1
Total- Suphan	25	19	15	29	27	24	20	19	19	21	23	21

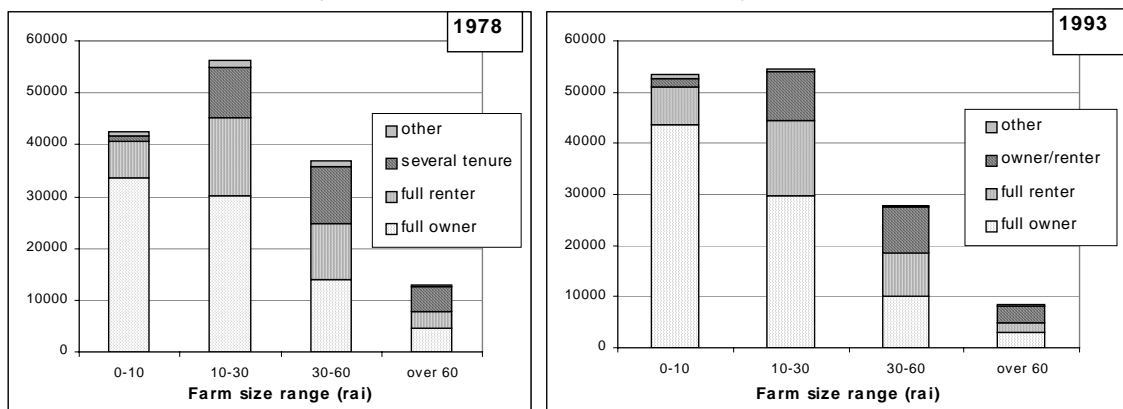
Source: Population and agricultural censuses (respective issues)

* Data for 1967 relate to rice-growing farms only and, therefore, cannot be compared directly to those of 1978 and 1998

5.4 Land tenure and farm size class

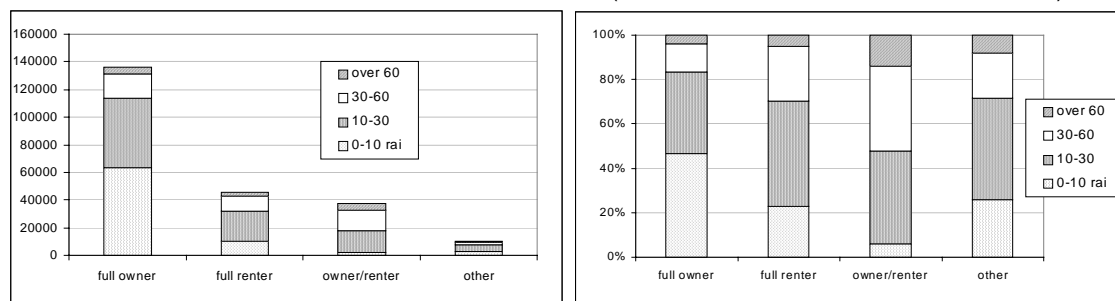
With such disparities of average farm area among tenure types, it is obvious that – reciprocally - land tenure types are not uniformly distributed within the different farm size classes. In 1978, farms smaller than 10 rai are mostly fully owned, while for the 10-30 rai range full owners are only slightly dominant; for larger farms the proportion is reversed, as expected, given that most farmers willing to cultivate more land have interest to rent it rather than to buy it (Fig. 26). Fifteen years later, proportions are quite similar, *except for the 0-10 range*: the increase of small farms in this range is almost totally due to full-owners (Fig. 26). This is probably the direct result of land fragmentation by inheritance and suggests either that small farms succeeded in intensifying or that the land market is not favourable to land renting, smaller farms being less able to afford paying rents than larger ones.

FIG. 26: LAND TENURE TYPES (NUMBER OF HOLDINGS/FARM SIZE CLASS), 1978 AND 1993



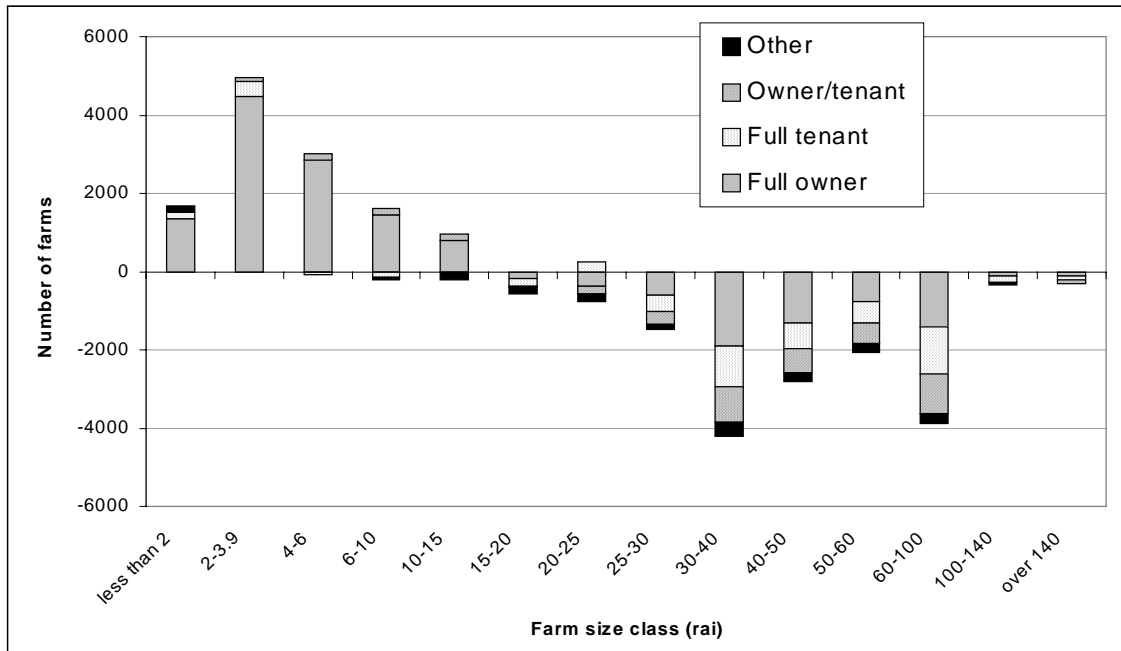
Viewed another way, the dominant class of full owners is found chiefly in the 0-10 rai and the 10-30 rai classes (Fig. 27). Full tenants prevail in the two medium strata, while owner/tenants are rather found in the medium and upper strata. This, of course, directly translates into varied average farm sizes, as evidenced earlier.

FIG. 27: FARM SIZE DISTRIBUTION FOR EACH TENURE TYPE (NB. OF FARMS AND %, 1993, 6 PROVINCES)



All these interlinked variables of farm size and tenure and their evolutions over the 1978-93 period are best summarised in Fig. 28. We clearly see how all tenures types of farms over 25 rai have been depleted to yield an increasing number of smaller owner-operated holdings.

FIG. 28: EVOLUTION OF THE NUMBER OF FARMS BY SIZE CLASS AND TENURE TYPE (1978-1993)



6 Landowner/tenant relationships and rental arrangements

A close look at the modalities of rental arrangements is necessary in order to interpret the landlord/tenant relations in the delta. This includes in particular the type of contracts (verbal/written, duration, etc), the social links between contacting parties, and the absolute value of the rent.

6.1 Contract covenants

6.1.1 Informality

The first evidence gathered in the 50's and 60's, let alone the case of Rangsit, much earlier in history, repeatedly points out to seemingly rather precarious contractual arrangements regarding the leasing of land: in four villages of the Saraburi and Nakhon Nayok Provinces surveyed in 1954, no written contracts were reported (Tomosugi, 1969). This is echoed by Amyot (1976) who found "virtually no formal contracts" in Ayutthaya in 1969. In 1964, 52% of full tenants had no written contracts (5 Provinces survey) and this rate was found as high as 68% in a wider survey on 11 provinces undertaken one year later (Table 16). Tomosugi (1969), however, considers that the late sixties see an increase in the use of written contracts and estimates its frequency at more than 50%. A later survey in the Mae Klong area in 1976 found a high proportion of verbal contracts (78%). This is corroborated by a survey in Nakhon Pathom Province (DLD, 1978c) which found a percentage of oral contracts of 73% (441 against 165). However, a similar survey carried out in the Don Chedi Project in 1978 (DLD, 1978a) gave a more balanced picture, with 278 tenants with oral contracts (56%) and 218 with a written one.

TABLE 16: TYPE OF CONTRACT

Source	1964:5 provinces		1965: 11 provinces			1976: Mae Klong	
Type of contract	Verbal	Written	Verbal	Written	None	Verbal	Written
Part tenant	53	47	72	27	1		
Full tenant	51	49	63	35	2		
All tenants	52	48	68	31	1	78	22

Sources: Chaiyong et al. [n.d], Chaiyong et al. [1965], Koomsup and Sreecompon (1985).

Nowadays, verbal contracts are still the rule and written contracts mostly occur in cases of renting land from non-relatives (especially absentee owners⁸²) or when specific security is needed (case of shrimp farming). On-going surveys in three villages of the delta suggest that written contracts are even getting scarcer: out of 90 rental arrangements, only 12% were based on a written contract. However, there is little evidence that verbal contracts are perceived by farmers as precarious. We will return later to this point.

6.1.2 Contract duration

Most of the observations gathered throughout the century emphasise the prevalence of year-to-year contracts. Because these are generally taken as a sign of precariousness, the Act Controlling the Rent of Paddy Land of 1950 fixed the minimum duration of a lease at 5 years (Tantikul, 1972). Little enforced, this clause was reaffirmed in the Act of 1974, with the duration raised to 6 years, as demanded by farmers' protests.

In 1964 (*5 provinces survey*), 79% of the lease contracts were found to be on the basis of a one-year-agreement, with no formal security regarding the renewal of the term. A percentage of 15% were found to have unspecified time limit, as it is common in the case of arrangements among kinsmen.

In 1965 (*11 province survey*), the share of the one-year contract reached 87%, with only 8% of contracts over 5 years or unspecified. A similar picture is given by the 1978 DLD surveys in Don Chedi and Nakhon Chum (10 –15% of contracts over one year).

Recent investigations suggest that this pattern has gone unaltered and that in current times most contracts are either of one year (regardless of whether they are verbal or written), or unspecified (between relatives).

6.1.3 Other covenants

In addition to their duration, lease contracts often include a series of other variations and secondary covenants. The most important one is whether the rent is to be paid in case of crop failure. In the early times of the rice expansion, at least during the recession of 1905-1912, landlords were showing little flexibility, in a bid to limit the impact of the depression on their own revenues (more on that later). A similar picture was observed in the depression of the 30's, resulting in growing indebtedness. The 1960's surveys also convey a gloomy picture. That period was characterised by a

⁸² In case of no written contracts and should the landlord be willing to withdraw his land, the tenant is entitled to demand a 6 year extension of his occupation. Investors who want to be in a position to sell their land at any

shift of the “terms of trade” between landlords and tenants, due to the high demand for land, which translated in lesser leniency from the landlords’ part. In 1965, for example, *two thirds of tenants still had to pay* the agreed rent in case of crop failure and 29% part of it (DLD, 1970). Scott (1976) has demonstrated how such exigencies have a deleterious impact on the economic subsistence of tenants. Although the data in hand are inconclusive, we would venture to say that this situation was to be found most probably in the flood-prone and upper delta. Regarding the landlord area of the East Bank, Tomosugi (1969) found that the landlord agents (*naikong*) were granting reductions and exemption. However, a more balanced picture is obtained if one does not exclusively focus on these periods of crisis (see § 6.6). It must be noted that, nowadays, most farmers, if not all, report that they benefit from rent reduction or exemption in case of crop failure.

Some agreements may also specify the time of payment (before the season, after harvest or after selling the production). Although prepayment is nowadays extremely rare it has been observed earlier, in 1968, by Tomosugi (1969), who noted “a recent conspicuous trend from payment in kind to *prepayment* in cash” in the upper part of the delta. In the 1964 *Five Province survey*, 35% of rents had to be paid in advance, but this percentage was only 11% in the subsequent wider survey of 1965 on 11 Provinces.

Contracts may include a high variety of other covenants, for example, the specification of who pays the land tax⁸³, whether equipment for land preparation is borrowed, whether cash is advanced for purchasing fertilisers, etc. While it was common, in the past, for tenants to borrow money from their landlord, this has nowadays become extremely rare, as co-operatives and the BAAC provide the bulk of the working capital.

6.1.4 Modes of payment

There are four main kinds of rental fees:

1. The first one, widespread in former times, is expressed in terms of *crop share*, typically between 1/3 and ½ of the production. Common systems are “*beng krung*”, which indicates a division of the harvest in two equal parts, “*beng 1 nay 3*”, with one third of the crop handed over to the landowner, and “*beng haa*”⁸⁴, but they are several other local variations. Attakorn (1987), for example, found a system of “*jay 4 nay 9*”, where 4 parts out of 9 are given as payment.

opportune point in time therefore prefer to issue written, but yearly, contracts.

⁸³ This was a point of importance at the beginning of the century, when this tax was still of some significance. Zimmerman (1930) reports that if the landlord paid the land tax, the rent was deemed to be higher.

⁸⁴ Literally “divide in 5”, system in which 2/5 of the harvest go to the landlord and 3/5 to the tenant.

2. The second one is in kind too, but based on a fixed amount of rice per *rai*, most commonly in the 6 to 15 *thang/rai* bracket (1 *thang* = 10 kg).
3. The third one is rent in cash, but indexed to the price of rice. It is also expressed in terms of *thang/rai* and is in fact a variant of the preceding one. The tenant pays the equivalent in cash at the time of harvest.
4. The last one is a simple cash amount stipulated in the agreement (*baht/rai*).

In general terms, it is almost invariably found that the rents paid in cash (4) are lower than the ones paid in kind (2 or 3). In addition, various studies agree on the point that rents paid per unit of land (2, 3 or 4) are lower under the fixed-rent than under share tenancy (1). For contemporary Asia, fixed rents are 20 - 30% lower than shared ones and final differences in tenant income average 30% (Otsuka and Hayami, 1988).

Seen in terms of risk, the four types of contracts can be typified as follows: share cropping (1) offers greater security to the tenant, as the rent varies according to the real production and incorporates the *agronomic (pests, diseases) and the climatic risks (flood, drought)*. Rents in fixed amount of rice (either paid in kind or in cash: (2) or (3)) do not protect against crop failure but embody some gradual protection against *market vagaries*. If prices are low, the rent paid by the tenant will also lessen in value. Last, fixed rents in cash (4) provide none of these two protections (against climatic and marketing risks) and are potentially, in a risk prone environment, the least favourable to tenants. In case of booming prices, however, fixed cash rent not readily adjusted may prove beneficial to tenants, whereas rents in fixed amount of rice do not allow them to capture the full benefit of the rise.

These four kinds of rent have been in use in different proportions according to the sub-region of the delta and the period in history (Table 17). In early times, fixed-cash rents were the most common in the Rangsit area, or more generally the East Bank (Johnston, 1975; Thaveesilp, 1978). In the flood-prone area, it is likely that both sharecropping and cash rents were to be found. Sharecropping can be seen two ways⁸⁵: as a disincentive for the operator, in that efforts he may make to improve his production are only partly rewarded (what is often dubbed “the Marshallian” theory) or, as mentioned above, as a protection for the renter against poor yields or crop loss (risk sharing). Both views are correct but in the pre-irrigation conditions of the Chao Phraya, delta it is most probably the second view which holds: the risk associated with the hectic hydrological and climatic regime was paramount and was the main

⁸⁵ “Sharecropping tends to be regarded as an interesting puzzle by neoclassical economists and as an oppressive form of exploitation by some Marxian economists” (Ellis, 1988). Ellis shows how conclusions on economic efficiency widely differ depending on the hypothesis on whose logic (the tenant or the owner) prevails, what is the underlying rationality and whether factor markets are competitive.

concern of farmers (van der Heide, 1903). Amyot's (1976) observations in 1969 of two floating rice areas of Ayutthaya confirm that "share cropping was the most common practice. It was preferred because both areas were more subject to crop damage from flood or drought and there was no danger of incurring in debts in case of crop failure". Share-cropping is also shown by Otsuka and Hayami (1988) to be linked with risk-averse farmers in conditions of uncertainty and with social settings favouring the enforcement of contractual stipulations on tenant's labour input⁸⁶.

Increased water control in the delta, especially in the last three decades, has drastically contributed to stabilising the agricultural production and share tenancy has virtually disappeared from intensive areas. Recent data (Table 17) also confirm that share cropping is almost a thing of the past in the delta, with only 6% of rents of this type (NSO, 1993). A closer look at the districts where it still has some significance reveals that these are all either located on the boundary of the irrigated area, and encompass a part of rainfed rice, or in the flood-prone area north of Ayutthaya (see map in Annexe 12). In these risk-prone and more traditional rice systems, share cropping is still significant: over the 1975-78 period, in the rainfed area of Phetchaburi Province, 95% of rentals were in shared crop, against only 10% in the irrigated Mae Klong area. Sri Prachan (north of Suphan Buri) had 80% of its rents in fixed rice amount, 12% in rice share and 8% in cash; in Bang Len, these percentages were 54%, 3 and 43% respectively (Koomsup and Sreecompon, 1985).

No doubt that the disappearance of share-cropping is closely correlated to the gradual stabilisation of production in the delta, a fact often overlooked by those who rather see it as an evil calculation of landowners to transfer all the risk to the tenant ("a direct assault on the survival income of tenant" for Douglass, 1993). The link between the security of water supply and the type of rent is also made clear by Terwiel (1979), with regards to a village located 5 km south of Ratchaburi: "Whilst ten years ago the *"beng haa"*⁸⁷ systems was prevailing, in 1977 there were but few landlords who would agree to rent out a field for a fixed portion of the yield. Instead the modern system (...) based upon a contract in which a farmer agreed to pay a fixed amount of money to the lessor was in operation. On the one hand this change reflected the greater security that water control had brought. No longer need the tenant protect himself against a disastrous crop failure. On the other hand the change indicated the growing importance of money as an independent medium of exchange".

⁸⁶ Analysing data from ten villages in Southeast Asia, Fujimoto (1996) concludes that "the older the age of the landlord, the smaller the area of the rented land, the closer the field to the landlord's house, and the smaller the size of the tenant's farm, the more likely was a particular contract to take the farm of share tenancy".

⁸⁷ See footnote note 84

Other factors are also responsible for the decline of sharecropping and the rise of cash arrangements: the share arrangement implies that the landlord be physically present at the time of harvest, not only to check the production but also because the totality of it is now sold straight away to rice mills. This is because the mechanisation of harvesting, which includes threshing, some winnowing and packaging, has eliminated the period of drying and has led to transporting the paddy to the rice mill right after harvesting. This is prohibitive for absentee landowners and at least inconvenient for local ones. In addition, as rice is not retained any more for household consumption but entirely sold⁸⁸, there is in general little incentive to receive rents in kind. Exceptions include rice traders with storage capacity who may have interest in selling the paddy a few months later, when the price is higher.

All these factors also strongly governed the shift from payment in fixed amount of paddy (*thang/rai*) to payment in cash-equivalent. As early as 1969, Amyot (1976) observes the tendency of Bangkok-based landlords to request their tenants to sell their rent in kind at market price and to hand cash over to them.

In the specific case of the floating rice area, where input in labour and capital were traditionally very low, the disappearing of cropsharing is also – and this in general is the first reason mentioned by farmers – associated with the increase of production costs. While handing out half of the harvest to the land owner may have been acceptable at the time when the tenant basically provided the seeds and land preparation (with his own buffalo), it was clearly ruled out when tractors became the rule and when the necessity to use fertilisers began to be felt, later in the eighties. With the on-going process of mechanisation of harvest (Molle et al. (1999) found that 72% of the flood-prone area was using combined harvesters in 1998), which raises cash input by another 400 baht/*rai*, sharecropping obviously becomes something of the past⁸⁹.

Changes in the type of rents also occur according to the economic situation. During the World Depression, the sudden fall in price was sharp enough to allow some tenants to obtain a return to share cropping (Prince Burachat, 1932). The trend from payment in kind to prepayment in cash observed by Tomosugi in the sixties, and subsequently by Takahashi (1976), reflects both the strengthening of the position of landowners, as demand for land exceeds supply, and the will of owners to protect their revenue from depressed rice prices (more on this later).

⁸⁸ The quality of rice produced is not to the taste of farmers who prefer to sell their production and later buy traditional varieties. In doing so they also deal away with the burden of individual rice milling but increase their costs.

⁸⁹ While a drastic decrease of the share owed to the owner could also have taken place, share cropping has disappeared, in line with the other factors mentioned.

Later in 1977, Gisselquist observes that, for opposite reasons, the rise of the price of paddy in the 1972-74 period was accompanied by a shift away from fixed-cash rent arrangements towards fixed-rice rent arrangements (see Table 17). Interestingly enough, a similar move was recently observed, in consequence of the boom in rice prices in the last 3 years, although the rent is now paid in cash equivalent.

Fixing the price in *thang/rai* appears as a flexible way to increase rents and there is evidence that this is the actual way to adjust them when prices happen to soar, rather than increasing cash rents. Short-life peaks in rice prices are dealt with through this mean and are passed on to cash rents only when (and if) they materialise as a long term trend.

On the whole, it appears that all these changes mirror differentials between the supply and demand of land, transformations of the infrastructure (risk), and change in rice prices and production costs (mechanisation). What rent type, between the fixed rent in kind or the cash rent, is more beneficial to farmers is debatable. If the cash rent is not too high, then the risk to have low or negative incomes is low, even if rice prices drop ; in addition, most of the (high) benefit generated by a hike in prices accrue to the farmers. The cash rent is more favourable than a cash one. On the contrary, if the cash rent is rather high, the risk to incur losses in case of low prices will be increasing and will offset the (decreasing) benefit drawn from high prices. A rent fixed in kind is preferable, in order to decrease risk. This trade-off between security and benefit, or between the two kinds of rents, depends on the relative value of the two rents as well as other site-specific factors such as the degree of "capitalisation" of the farm (sensitivity to loss). The fact that rents in cash are in general lower than fixed rents in kind is in line with this remark and suggests that the difference is a "measure of the "price" of a higher security against drops in rice prices.

Can a chronological perspective be derived from the disparate data presented in Table 17⁹⁰ ? This is made difficult by the mix of local and regional data but it can be attempted, with some reservations on account of the fragmentary nature of the information, to distinguish between our three sub-areas:

- 1) The East Bank, including Rangsit, has early been dominated by rents in cash, although there is some indications that the very first rents may also have been charged in kind: Thaveesilp (1978) mentions rents of 2.5 *thang/rai* near Bangkok in 1889 and Hanks (1972) reports that newcomers, around 1895, could rent land at 10 *thang/rai*. Rents in kind were *perhaps* to be found in arrangements between

⁹⁰ Data from the 3 agricultural censuses and for the 1965 *11 Province survey* are given by province in Annexe 14.

farmers, while landlords collected cash through their *Naikong*. As the area was predominantly owned by absentee landlords, cash rents were the rule, at least until WWII, when a shift towards fixed-rice rents was observed. These rents later ended up being paid in cash-equivalent⁹¹;

- 2) in the flood-prone area, there are mentions of cash rents in Ayutthaya in 1909 (Thaveesilp, 1978), and in Hantra, in 1930 (near Ayutthaya: Zimmerman, 1931), but it is believed that sharecropping was also found in these areas of older settlement and, later, combined with fixed-rice rents (Piker, 1983). Although the latter type also eventually gave way to cash-equivalent rents, sharecropping maintained its share between 1/3 and 2/3 until the early 80's when, with the stabilisation of production (Molle et al. 1999) and the increase in production costs, it gradually gave way to fixed rice rents; sharecropping first declined in Ayutthaya (only 25% in 1978, against 38 and 54% in Sing Buri and Ang Thong respectively).
- 3) in the upper delta and Mae Klong area, tenancy was rare until WWII; since then, both cash and fixed-rice rents have been found in comparable proportions, although locational and temporal variations are significant. Tomosugi has observed the shift towards prepayment in cash in the 60's. It seems that some inverted trends occurred in periods of appreciation of prices, such as in 1973 (Gisselquist, 1976) or more recently 1997. Rents in cash and fixed amount of rice (now paid in cash equivalent) are observed in all parts, even though the former seems to slightly prevail. Rents in kind are now rare to exceptional in the delta.

6.2 Social relationships between contracting parties

The types of arrangement, the amount of the rent and their socio-economic meaning are very much dependent upon the degree of social proximity between the land owner and the tenant. As Cleary and Eaton (1996) have put it, what matters is *who* is the owner, rather than tenancy in itself.

Rental arrangements between relatives tend to be the most common, sometimes on a free or loose retribution basis. We have seen earlier that a significant part of the rented land was coming from *full-leasing holders*, who often migrated to cities: they, most of the time, would rent their plots to those of their relatives who chose to remain in the village. The 1965 *survey in 11 provinces* of the Central Plain revealed that 37% of all owner-tenants and 31% of all tenants rented their land from relatives or parents⁹².

⁹¹ To the extent to which Bang Chan and Bankhuad are representative of the East Bank, which is not necessarily the case. Data are inconclusive on that point.

⁹² With another 30% of contracts between neighbours.

TABLE 17: HISTORICAL VARIATION OF THE TYPES OF RENT

Source	Location	Year	Cash	Kind	Crop share
Johnston, Manopimoke	Rangsit	1880-1920	Predominant		
Zimmerman, 1931	Central Plain	1930	77 ^{##}		23
Prince Burachat, 1932	Ang Thong	1930	Before crisis		Increase after crisis
Janlekha, 1955	Bang Chan (Minburi)	1948-52	8	91	1
Economic Survey	Central Plain	1953	25 (+ 16% free)	63 (in kind)	
Kaufman, 1960	Bangkhuad (near BKK)	1954	70	30	0
Piker, 1983	Banoi, Ayutthaya	1963	Predominant		
Census	Our 6 provinces	1963	52	48 (in kind)	
Chaiyong et al., n.d.	5 central provinces	1964	41	52	7
Chaiyong et al., 1965	11 central provinces	1965	23	63	14
Lin & Esposito, 1976	Central Plain	1968	32	68 (in kind)	
Fuhs & Vingerhoets	Ayutthaya, floating rice	1970	6	38	56
Gisselquist, 1976	Ang Thong	1972	17	71	8
Takahashi*, 1976	Central Plain	early 70s		66	
Attakor**, 1987	Tha Rua, Ayutthaya	1973	25	30 ^{###}	45
Gisselquist, 1976	Ang Thong	1974	4	82	4
Tanabe, 1978	Sing Buri (deep water)	1974	87	13	0
Jewsaward et al., 1982	Central Region, 490 tenants	1975	33	67 [#]	
Koomsup, 1985	Mae Klong	1976	24	47	29
Koomsup, 1985	Bang Len	1976	43	53	4
Census	Our 6 provinces	1978	74 (fixed)		26
Chirapanda, 1983	Manorom, Chai Nat	1979	47	31	22
Fujimoto, 1987	Phophya, Suphan Buri	1985	21 (+ 9% free)	63	7
Census	Our 6 provinces	1993	95 (fixed)		5
Latham, 1999	Tha Wung, Lop Buri	1998	91 (+ 6 free)	3	0
Unpublished data	Tha Rua, Ayutthaya	1999	35 (+ 12 free)	53	0
Unpublished data	Suphan Buri	1999	14 (+ 24 free)	62	0

* cited by Douglass (1984). ** The sample contains both transplanted and broadcast rice. [#] It is not clear whether rents "in paddy rice" include some rents in crop-share or not. ^{##} Most of the cases of share cropping are in Chanthaburi and Phetchaburi provinces. In Thanyaburi (Rangsit), all 42 cases are in "cash rent". ^{###} this percentage is higher for full tenants (average 1973 and 1974).

The frequency of agreement between relatives is typically higher when we stray from the core of the delta. A study from 1979 about the Mae Klong area reports that up to 55% of farmers rented land from relatives⁹³ (Koomsup and Sricomporn, 1985). Around that same period, Tanabe (1978) observed a similar percentage of 57% in two villages of Sing Buri Province, while Visser (1980), in the village he studied in Chai Nat province, found that "the one who leases and the one who lets land are related, usually closely, in 82% of the cases". Phelinas (1993) reported a percentage of 55% in Suphan Buri Province. Fujimoto and Matsuda (1987) found that in Phophya (Suphan Buri Province), 63% of owners renting out land were farmers and that 44%

⁹³ Over the 1975-78 period, 95% of rentals in Phetchaburi were in shared crop, against only 10% in the Mae Klong area. Sri Prachan (Suphan Buri Province) had 80% of its rents in fixed rice amount, 12% in rice share, 8% in cash; Banglen 54, 3 and 43% respectively.

of contracts were made between close relatives and 18% between distant relatives. In 1967, in Hua Kok, Kemp (1992) observes that “the great majority of contracts are between people who know each other fairly well and just over half of those recorded were between people considered to be true kinsmen including affines”. All these observations converge to a remarkably stable share of rental agreements between close kinsmen around 55%.

Even in the case of lease arrangements between relatives there is not any regularity in rents observed: these are often very low, but may also not be so. The first case occurs when the leasee is in a favourable economic position (he may have a lot of land, other activities) and a low rent reflects his solidarity towards a less better-off kinsman. In the second case, the owner needs to be helped (typically, he is too old to farm and has limited revenue, or he has gone to Bangkok but is not in a position to make any savings); the relative who accepts to farm his land for a rather “commercial” price does it willingly, with the clear intent to help his relative by providing him the labour force he lacks, rather than to make benefit out of his participation. Share cropping is often practised in such situations (see Gisselquist (1976), who found that “share rental arrangements are used between close relatives”). Because these rental arrangements – even when expressed in cash units -are (still) pervaded by non-commercial social dimensions, they cannot be understood on a purely arithmetical or accounting basis. Visser (1980), also reports some examples of transactions between villagers and sees many of them as not purely commercial, what is apparent in rental arrangements between relatives “from the fact that in many cases no clear arrangements are made about the price or the length of the agreement”.

Another large category of contracts are established between villagers and absentee landlords, who generally reside in the capital or in Provincial centres. It is widely observed that absentee landlords tend to be more lenient than landowners living in the community (see Janlekha, 1955; Stifel, 1976; Gisselquist, 1977; Chalamwong and Feder, 1986; Phelinas, 1993⁹⁴). Rather than giving themselves the burden to control farm land use, they generally content themselves with rather low rents, typically 6 to 10 *thang/rai* (or the equivalent in cash), while effective rents vary usually between 10 and 15 *thang/rai*. They also commonly request a rent per rai, often irrespective of the number of crops grown on the plot. This may sometimes prove very beneficial for farmers growing 2 or 3 crops. Arrangements tend to be stable and are almost always in cash, as they are not interested in collecting paddy. Their “low-profile” is attributable to their social and physical distance from the community with

⁹⁴ “There is no evidence that landlords exploit their tenants (who in many cases are relatives and friends) by charging rents above competitive norms compared to other [local] owners.”

which they have interest to stay on good terms⁹⁵ and to the fact that rents are not the “point” any more, when compared to the asset itself and the benefits drawn from speculation. Following Scott’s argumentation, it could also be argued that the lower rent of absentee landlords can be partly ascribed to their impossibility to act as patrons and fulfil the protective role generally ascribed to them.

On the East Bank (Chachoengsao Province), we found that most of the rents with Bangkok-based landlords were between 5 and 10 *thang/rai*, typically 8 *thang/rai* (paid in cash equivalent). As this rent is charged *per year* and as this area is double-cropped, it appears that the landlord area is better characterised by its low rents than by the opposite, even though this is in some cases partly due to a lower fertility⁹⁶.

A mention must also be made about the land administered by the Crown Property Bureau⁹⁷, as royal land amounted to a significant share of “the landlord area” constituted at the turn of the century in the specific historical conditions recalled earlier. Rents for “royal land” (*naa luang*) are generally at 100 baht/*rai*, or even less in some flood-prone areas around Ayutthaya, which corresponds to exceptionally favourable rates. Rates are also commonly found to be very low in land belonging to local administrations, RID or temples (Tanabe, 1978).

A third category of contracts includes rentals from local farmers (active or inactive) and *all-leasing-holders* residing in the village. Although the evidence gathered by different village studies is fragmentary, there is the overall impression that these contracts are those who are the closest to the maximum return market conditions allow the owner to expect when leasing his land. This is tantamount to say that they are the least favourable to tenants, which is a result of the fact that the transaction is purely commercial and that – in some instances – the land owner has few other incomes (case of old *all-leasing* farmers).

This statement, however, must be balanced by the fact that a significant share of these rental arrangements between farmers of the same village comes under the general category of patron-client relationships. Based on a moral idea of reciprocity, such relationships derive their social force from a shared conception of mutual rights and obligations: while the *patron* may provide land, work, food, lend a buffalo or a small amount of money, all things seen as increasing the *security* of his *client*, the

⁹⁵ This is a consequence of the fact that urban absentee landlords are interested by the speculative rents that they expect to extract from the hike in land prices rather than by the comparatively low rentals. This stems from the dissociation between the value of land and its agricultural economic productivity.

⁹⁶ But fertility is rather low; average yields are around 60 *thang/rai*, against 75 *thang/rai* in the upper delta.

⁹⁷ 53,942 rai of this land has been donated by the King for the land reform initiated in the 70's. Ramsay (1982) remarks that, while much publicity was given to the case, the land was in fact bought by ALRO and further administered by her.

latter will, in return, perform a series of tasks and services for his patron. In the process, the authority and the social position of the patron gains legitimacy, while clients weather the uncertainty of destiny.

This is not – obviously - the place to enter in the extensive debate and literature concerning patron-client relationships⁹⁸. Whatever the – often contrasting – interpretations given of them, all observers agree on the evidence of a weakening of these traditional social ties. Although exchanges in the village are increasingly mediated by cash, and with some reservations allowing for some (rare and particular) cases of conflicts, we believe that social norms still regulate and help control the potentially deleterious imbalances of wealth and power in the villages. Visser (1980) reports that “it is considered acceptable that rich farmers enter into opportunistic and lucrative agreements and the view is held that the poor farmers have only themselves to blame for their situation. There are limits, however. Taking away a debtor’s land definitively, has to be weighed in social terms more or less independent of economic laws on this matter. It does occur, but the rich entrepreneurs restrain themselves”. These “limits” therefore embody social aspects which can still be observed in village contractual relations (see § 6.4).

6.3 The value of rents and their historical changes

There remains the question of whether the landlords’ rents extract most of the surplus produced by their tenants or not. This question has no simple answer. When looking in more detail, it appears that the question of land rentals resists simplification and generalisation. What is the rule is the endless variability of absolute rents. For the sake of example we may resort to the extensive survey carried out in 1975 in 15 districts of the Central Plain: rent in kind and in cash corresponded to less than 50 kg/*rai* in 29% and 38% of the cases respectively; 49% and 32% had to pay between 50 and 100 kg/*rai*, 19% and 10% between 100 and 150, 3% and 20% over 150 kg (Chirapanda, 1983).

All these differences can be explained by the following factors:

- a) the personal *relationships* between the owner and the tenant, and the category of the former (see above);
- b) the relative *scarcity of land*, which is strongly correlated to the price of rice (if the price is good, it is very hard to find land to rent and vice-versa); more generally, rents adjust to the economic situation. Adjustments are also made through a modification of the type of payment (see above);

⁹⁸ See Scott (1976), Hanks (1972), Piker (1967; 1975), Douglass (1984).

- c) the *type of payment*, kind or cash (see above).
- d) the type of rice (irrigated/deep water) or more generally the level of *water control* (access to irrigation water and drainage conditions). This aspect was paramount during the expansion of the rice frontier; rents varying from 1 to 10 baht, as reported by van der Heide (1903), are illustrative of differences in risk, rather than in average yields, which would not allow for such discrepancies. This is consonant with the generalisations elaborated by Scott (1976) on risk and subsistence in commercialised rice economies.
- e) the projected *land-use*. For example, in 1999, the common rent in Kamphaengsaen (Mae Klong area) was 500 baht/*rai*/crop of rice, more or less the same for sugarcane (but it used to be 600 or more when prices were higher), whereas values for a vegetable plot near the canal were in the 1,000 to 1,500 baht bracket. In the triple rice-cropping area (e.g. *amphoe* Sri Prachan, Suphan Buri province), the normal rent is 1,000 baht/*rai*/year (for 2 or 3 crops of rice), or 15 *thang/rai*, but reaches 2,000 baht/*rai* for water chestnut. On the East Bank (Chachoengsao Province), paddy fields are rented at 8 *thang/rai* (or approximately 400 baht/*rai*/year), but at 3,000 baht/*rai* for those who have shifted to shrimp farming ! Rates for shrimp ponds in the Bang Len area are around 4-5,000 baht/*rai*. Some particular areas with high productivity may have a higher demand for land: such is the case in the orchards on raised beds of Damnoen Saduak district. Cheyroux (1998) reports that rents (in 1995 value) have increased from 400 baht in 1990 to 1,000 baht/*rai* in 1995.

While the literature is not short of mentioning⁹⁹ extortive share cropping at ½ of the crop or more, some authors have also suggested that rents are generally, on the average and despite exceptions, not extortive. Stifel (1975) found that in 4 villages of Nakhon Pathom and Ayutthaya, “the structure and conduct in the operations of the agricultural land market suggest tentatively that the landlords are not exploiting the farmers by charging rentals over the competitive norm”. Koomsup and Sricomporn (1985) report that when asked about their opinion on the rentals they paid, one third of farmers found them too high and two thirds “fair (just right)”, but it must be observed that the values given by their survey are particularly low when compared with other sources.

⁹⁹ A recent example of a little nuanced and misleading statement can be found in Belo et al. (1999): “The Land Rent Control Act was practically forgotten, as tenancy arrangements once again became common giving landlords rights to one half to two-thirds of the harvest”.

The dominant impression is one of an extremely flexible market, where demand is much dependent on land scarcity and rice prices¹⁰⁰. Rents can be adjusted accordingly - although they appear somewhat “sticky” – either by changing the type of rent or its nominal value. The possible combinations of the above parameters command a high diversity of situations and limit the impact of a longitudinal analysis. However, this section gathers a number of historical observations (pooled in Table 20) and hazards a comparison of rents along time and of their relative burden for the tenant.

6.3.1 Fixed rents in kind

Rents expressed in terms of amount of rice generally remain in the 6 to 20 *thang/rai* bracket, and most commonly in the [10-15 *thang*] bracket, despite the drastic gains of productivity which doubled average yields in the last 30 years from, say, 35 *thang* to 75 *thang/rai*¹⁰¹. It is not easy to distinguish between the different rice-growing environments because data are too fragmentary and because they do not always specify the type of rice.

Regarding the flood-prone area, very few data are available and it is not possible to derive a reliable time series. Janlekha (1955) notes that, between 1948 and 1952, an increased demand for land (probably following the hike in rice prices of 1947) pushed average rents upwards, from 6 to 8 *thang/rai*. In 1952, USOM's reports give rents between 10 and 20 *thang/rai* in Lop Buri and Ang Thong provinces but it is not clear whether they predominantly relate to the flood-prone area or not. In the 5 *Central Province survey* of 1964 which encompasses Ayutthaya and flood-prone areas of Lop Buri and Nakhon Nayok provinces, rents in kind average 6 *thang/rai*. They are much higher in the Ayutthaya village studied by Amyot (1976) in 1969 (around 12-15 *thang/rai*¹⁰²) and in Tomosugi's observations in 1968: 20 *thang/rai*, in areas with productivity around 40-50 *thang/rai*. More recent data include Attakor (1987), who found rates in the 10-17 *thang/rai* bracket in Tha Rua¹⁰³ and our own survey in the flood-prone area of Saraburi Province: 9 *thang/rai* [5-10 *thang/rai*]. What seems of little doubt is the increase of rents in the late sixties and seventies. This can probably be ascribed to the “dramatic increase of landlords in the flood-prone area” reported by Tomosugi (1969). This most vulnerable area (lower yield, higher risk) has been subject to exploitative rents during this period, consecutive to a shift in landownership from farmers to local investors. This situation has been partly reverted, with rents

¹⁰⁰ Some idle land was observed in the Mae Klong area in 1995, while all plots were rented in the succeeding years.

¹⁰¹ At least in the area cropped with High Yield Varieties.

¹⁰² Or up to 20 *thang/rai*, but these higher values correspond to a village with transplanted rice.

¹⁰³ But these also include an unspecified portion of transplanted rice.

most commonly around 10 *thang/rai*, but increased cash inputs maintain the profitability of rice in this area at a low level. Noteworthy, however, is the slight decrease in rents consecutive to the two years of floods (1995 and 1996) and indicative of a decline of demand.

In the upper delta, rents appreciated in the sixties and seem rather stable ever since, with 15 *thang/rai* being the most common value. A similar stability is observed on the East Bank but rents are much lower, usually between 6 and 10 *thang/rai*, partly due to a lower productivity, partly because of the specific tenure situation. This stability, however, does not translate straight away into an effective diminution of the rent burden. Production costs have also tremendously increased and the calculation requires further caution. Table 18 attempts to compare the evolution of the rent burden over the years¹⁰⁴. It reveals that the stable rents of the East Bank imply a decrease of the real rent from 44% to 20% of the net cash income per *rai*. The situation is similar for the *upper delta*: although the rent represents a share of 20 to 30% of the harvest, its real value expressed *in %* of the cash income first increases from 1950 to the seventies, then declines, from 44% in 1971 to 30% nowadays.

TABLE 18: COMPARISON OF RICE PROFITABILITY OVER TIME, FOR RENTS IN KIND (TRANSPLANTED RICE)

Year	Yield (<i>thang/rai</i>)	Rent (<i>thang/rai</i>)	Other costs (<i>thang/rai</i>)	Net income* (<i>thang/rai</i>)	Rent <i>In %</i> of net income	Rent <i>in %</i> of harvest
East Bank						
1954	30	8 [6-10]	8	23	36	27
1965	30	8 [7-9]	12	18	44	27
1975-80	50	9 [8-10]	16	34	26	18
1995	60	8 [6-10]	24	41	20	12
Upper delta, transplanted						
1950	30	7	7	23	30	23
1965	35	11	8	28	40	31
1971	40	12	13	27	44	30
1978	50	15	16	34	44	30
1988	60	15	24	36	41	25
1995	75	15	28	47	32	20
1998	75	15	25	50	30	20

Sources: same as Table 19. * Net incomes do not include land rents, opportunity costs of land and family labour.

6.3.2 Fixed rents in cash

It is not easy to derive a clear picture from the contrasting and quickly changing economic parameters of rice cultivation on the East Bank during the 1880-1920 period, where cash rents first appeared and were the rule. Johnston (1975) refers to a rent of 3 baht/*rai* set by the Lamsai Company (after two years in which rents were

lower or sometimes nil); this represented *one sixth* of the gross value of the production. In 1902, the Rangsit Company¹⁰⁵ is reported to have offered rents at 4 baht/*rai* (with two initial years of lower rents). With farm gate prices at around 70 baht/ton and yields between 20 and 25 *thang/rai* (Feeny, 1982), rents thus represented a share of 23 to 28% of the value of the paddy.

Average values, however, are unable to capture the complexity of things, as rents were reflecting above all the risk factor, which does not appear when we consider average yields. Van der Heide (1903) reports that "land is cheapest in price and rent in the high tracts near the river and the value in general continually increases towards the lowest middle parts, where flooding is of longest duration. This difference in several cases amounts to this proportion that people pay for the lowest lands 9 to 10 *ticals* [baht] rent per *rai* and for land near the rivers 1 to 2 *ticals* whilst in the first case the selling price may amount to 80 *ticals*, against 10 to 20 *ticals* in the last case."

Unfortunately data about cash rents during the first half of the century are scarce. Zimmerman and Andrews surveys provide no detailed information. A few historical observations are provided by Thaveesilp (1978), for the 1906-1922 period: depending on the quality of land, rents varied between 1 and 4 baht/*rai*.

The situation in the 60's is given by the *11 Province survey* (see Annexe 15), in which three of our provinces are unfortunately not included. Sing Buri, Suphan Buri, Samut Prakan and Chai Nat are in the 90-100 baht/*rai* bracket, while landlord areas (Bangkok, Thonburi, Chachoengsao) have lower rents, between 25 to 60 baht/*rai*. It seems that 100 baht and 50 baht are fair averages of rents for the upper delta and landlord areas in the mid 1960's (but payment in kind was most common). With the intensification starting in the early 70's, rents rose quite rapidly to 150-200 baht/*rai* (Tanabe, 1978; ILACO, 1975, Gisselquist, 1977). In the late 80's, rents were around 400 baht and are nowadays around 500 baht (with a great variability). This sequence refers to transplanted rice (first traditional varieties, then HYV). In the flood-prone area, rents are generally 20% or more lower but correspond to a higher share of the income. Even with the higher prices fetched in the last 4 years, rents seems not to have caught up with the hike and to have remained around 500 baht/*rai* for HYV and 320 for traditional varieties (which is less than 10 *thang/rai*, with prices higher than 4.5 baht/kg).

¹⁰⁴ These calculations are tentative: results are of course sensitive to the assumptions made on average yields, costs and rents. However, these average values have been estimated based on all the historical data available to the authors. Adjustments of yields and costs do not alter the historical declining trend evidenced in the table.

¹⁰⁵ Standing here for the "Siam Land, canals and Irrigation Company"

Despite difficulties in defining average yields, production costs¹⁰⁶ and rents, Table 19¹⁰⁷ suggests that real fixed cash-rents have decreased over time. Expressed in amount of paddy, rents are generally in the 8-13 *thang/rai* interval, with a drop after WWII (4 *thang/rai*) and a slight peak in the early seventies. Given the increase in productivity, however, the trend represents a declining share of the harvest, from 25% after the War to 11% nowadays, but with a peak at 33% around 1970. This crisis period appears as one in which rents were rising, productivity was stagnating and real rice prices were at their lowest. Therefore, the rent burden was high both in terms of production and in economic terms. With rising cash production costs, however, this downward trend does not necessarily mean increased cash income. Table 19 also indicates that the rent expressed in percentage of the cash income per rai (rental not yet included) has also dramatically declined from 48% to 17%.

TABLE 19: CASH RENTS, EXPRESSED IN *THANG* OF PADDY (ONE *THANG*=10 KG)

Year	Rent (baht/rai)	Paddy price (baht/ton)	Rent (<i>thang/rai</i>)	Average yield (<i>thang/rai</i>)	Rents in % harvest	Rents in % net income	Net income in % gross income
East Bank, broadcast rice							
1902	4	60	7	30	22	26	85
1910	5*	50	10	30	33	44	75
1919	4.3*	60	7	30	24	32	75
1929	4*	50	8	30	27	34	78
1931	2.5*	20	13	30	42	108	39
Upper delta, transplanted rice**							
1929**	8 [6-12]	70 [60-80]	11	25	46	76	60
1934**	3 [2-6]	25 [20-30]	12	25	48	109	44
1948	30	800	4	20	13	16	80
1954	60	800	8	30	25	33	75
1970	130	1000	13	40	33	48	68
1976	220	2000	11	50	22	32	68
1988	450	3800	12	70	17	26	66
1995	500	4500	11	75	15	24	63
1998	500	6000	8	75	11	17	67

Sources: data for the East Bank are adapted from Johnston (1976), Prince Burachat (1932), Ingram (1972), Thaveesilp (1978); range of rice prices after crisis taken from general statistics; * include land tax. ** Adapted from Prince Burachat (1932), broadcast rice in Ang Thong Province.

Data for the upper delta are adapted and/or averaged from: Janlekha (1956), Kaufman (1960), Sriswasdilek (1975), Isvilanonda (1972), ILACO (1985), Fujimoto and Matsuda (1990), Isvilanonda (1990), Molle and Kaewkulaya (1998), Pitipunya (1995), DELTA Project (unpublished data).

The income calculation does not consider opportunity costs of family labour and land. Land preparation is supposed to be carried out by the farmer. Land rents are not included. Rent values are estimated based on Table 20.

¹⁰⁶ Rice prices are taken as the average value of the three or four years around the indicated year.

¹⁰⁷ The table gives a few estimates for the Rangsit over the 1902-1931 period and a series of values for the upper delta: these apply to transplanted rice and include a change to HYVs around 1975. It can be seen that the pre and post-crisis values (1929 and 1931) for the two sub-areas are comparable.

Rents in some parts of the flood-prone area are, in contrast, sometimes very high: extreme rents of 500 baht/rai can be observed, which severely curtails the gains of tenants and even discourages tenancy. Reasons for such a situation are unclear, although it may reflect locally high demands in an area of high tenancy.

TABLE 20: EVOLUTION OF RENTS (1900 –2000)

Year	Rent in kind		Rent in cash	Share-cropping	Location	Source
	Thang/rai	Equivalent baht/rai	(baht/rai)			
End XIX th	10, landlord areas				Lower delta, East bank	Hanks, 1972
1902			4 (1 first year, 2 sec. year)		Rangsit	Jonhston, 1975
1902			1 to 10 (according to land quality).		Rangsit	Van der Heide, 1904
1905			2 4		* Bankhuad (near Bangkok) * Ratburi	In Feeny, 1982
1907			1-4 2.5-4		* Thanyaburi (Rangsit) * Nakhon Chaisi	In Thavesilp, 1978
1909			1.5 low class 1 low class		* Khlong Prawet * Ayutthaya/Ratchaburi	In Thavesilp, 1978
1916				40% / 12-16%	Good land/bad land	In Feeny, 1982
1922			2		Khlong Saen Saeb	In Thavesilp, 1978
bef. crisis			4		Rangsit	Zimmerman, 1931
1930			12 / 8 / 6 for 3 qualities of land.		Ang Thong	Prince Burachat, 1932
1932			6 / 3 / 2.5, idem above, after crisis.		Ang Thong	Prince Burachat, 1932
1948	5-8		30		Bang Chan	L.Sharp / Janlekha, 1955
1952	6-10		50			
1952	10-20			1/3 to ½	LopBuri, Ang Thong	USOM, 1952; in Tomosugi
1953	12.6 [10-15]		53 [35-77]	¼ to ½	Central Plain	Economic Farm Survey; 1953
1954	8		60		Bankhuad,Minburi	Kaufman, 1960
1962				¼ to ½	Manorom Project	Resanond et al. 1962
1963	10				Ang Thong	Gisselquist, 1977
1964		55	54		5 Central Provinces	Chaiyong et al., [n:d]
1950-65	10 or more; 6-7 until 1950		100 or more		Sing Buri	Tanabe, 1978
1965	9		75	1/3 to 1/2	11 Central Provinces	Chaiyong et al., 1965
1967	9		97		Central Plain	Uthit Naksawat, 1961
1967				2/5	Ratchaburi	Terwiel, 1979
1967			20-100	1/5 to 1/3	Upper central plains	Kemp, 1992
1968	5-10 20 10-12	200 100-120	100	¼ to 1/3 ½	* Lower delta * floating rice area * upper delta	Tomosugi, 1969
1969	12-20		200	½, adjustable	Ayutthaya, transplanting floating rice.	Amyot, 1976

Table 20, *continue*

1970	14				Suphan Buri (floating rice area)	Chungtes and Burton, 1972
1971	10		88		11 central provinces	Chuchart & Chirapanda, 1974
1971	15		130		Ban Mae Dist. Lop Buri	Smuckarn, 1972
1972	13-15		200		Ang Thong	Gisselquist, 1977
1970-4	8-20		80-250		Central Plain	Chuchart & Chirapanda, 1974
1973			110		Central Region	NSO, in Turton, 1978
1973	10-17		132		Tha Rua, Ayutthaya	Attakor, 1987
1974			50 and 100		West Bank (Ayutthaya)	JICA, 1977
1974	10		150-250, less for relatives		Sing Buri, deep water	Tanabe, 1978
1975			Recently increased from 120 to 200	25-40%	Upper delta	ILACO, 1975
1975	7.2 [0-15]		89 baht [0-250]		Central Region, 490 tenants	Jewsaward et al., 1982
1976			250 (30-35% of income)			World Bank, in Mehl (1981)
1977	8-10	200	200-300		Pak Kret	Pramuanratkarn, 1979
1978	12.1 [10-17]		100 [only field crops]	-	Suphan Buri, 408 tenants	DLD, 1978a, Don Chedi
1978	-		178 [only field crops]	-	Suphan Buri	DLD, 1978b, Phanom Tuam
1978	8.4 [6-10]			50%	Ratchaburi, 800 tenants	DLD, 1978c, Nakhon Chum
1979	9 17				* Bang Len * Sri Prachan	Koomsup & Sreecomporn, 1985
1979	10	300	131	33-40%	Manorom	Chirapanda, 1983
1980			230		Mae Klong	ILACO, 1980
1983	10 (28% prod.)		201 (19% of prod.)		Central Plain	Banterng, 1985
1985	19	480	509		Suphan Buri	Fujimoto and Matsuda, 1987
1985	12-15	310-390			Mae Klong	ILACO, 1985
1986			448 (per crop)		Central Plain	Isvilanonda & Wattanutchariya, 1990
1988			500		Saphaya, Chai Nat	Montesano, 1992
1991	9-10*	370			Chachoengsao	Banpasirichote, 1993
1991		182	560		Suphan Buri	Phelinas, 1995
1993			390-455		Suphan Buri	Pitipunya, 1995
1996-8			400-600		Central Delta	Molle, unpublished data
1998	10-15		312 [200-500]		Central Delta	Molle et al., 1999: trad. varieties
1998			415 (300-500)		Lop Buri, Tha Wung	Latham, 1999; mostly trad. varieties
1999	8				Chachoengsao, B.Nam Priaw	Molle, unpublished data
1999	15		280		Sri Prachan, Suphan	On-going survey, unpublished data
1999	9 [5-10]		254		Don Phut, Saraburi	On-going survey, unpublished data

* The report mentions a rent of 9-10 kg of rice/rai. We have assumed that it was a mistake and kept a rent of 9-10 *thang/rai*.

6.4 Note on the precariousness of arrangements

Viewed by common wisdom as a negative point (Zimmerman, 1930; Chiengkul, 1985; Fuhs and Vingerhoets¹⁰⁸, 1970; Turton, 1978; etc¹⁰⁹), there is no convincing evidence that verbal year-to-year contracts are considered loose or precarious by farmers; cases of malpractice are not very often heard of in the delta, at least in recent times.

What deserves to be emphasised might rather be the tacit recognition by the village community of the proper behaviour in such issues¹¹⁰. The stability of rental contracts also supports the evidence that trust¹¹¹ is an important element of rental arrangements and that these are rarely perceived as precarious by farmers. Firstly, more than half of the rental contracts have been shown to occur between relatives or within the circle of kinsmen in which close personal links of trust make the formalisation of contracts unnecessary. The fact that “kin do not cheat one another and so find it unnecessary to make formal agreements (Kemp, 1992)” is, by and large, corroborated by all the village studies. Secondly, if the landlord is a local farmer then (irrespective of the level of the rent) he is unlikely to be willing to engage in some misconduct which would tarnish his reputation and make him untrustworthy (Mehl, 1986). As alluded to earlier, villages have implicit social rules governing proper conduct and these prove to be rather efficient. Even when both parts are not relatives, agreements are often done following a patron-client pattern rather distinct from a commercial contract in which there is the reciprocal feeling that a favour is being granted, in return of other services. Unless one contracting party feel that the arrangement is not fruitful, there is no incentive to break it from either part¹¹². Hayami

¹⁰⁸ “Insecure tenancy poses a severe obstacle to agricultural progress. The strict implementation of existing tenancy regulations or, if necessary, the formulation of a new tenancy law are highly desirable, if modernisation of agriculture is to be achieved”.

¹⁰⁹ Almost all documents relative to land tenure problems hark back to the point without questioning it.

¹¹⁰ “Virtually all rental contracts in Wang Nam Yen are unwritten agreements enforced by the realisation that poor behaviour by a party to a contract will identify that person as untrustworthy and will make it difficult for him in future contract negotiations. Where proper behaviour is defined by the community at large which enforces sanctions, the presumption must be that parties to contracts act efficiently according to a definition of efficiency approved by the knowledgeable farming community of which they are a part” (Gisselquist, 1977).

¹¹¹ To some extent, this also holds for money borrowing among members of a village or community. Defaulters are few in that “non-repayment precludes additional and results eventually in the person being socially ostracized” (Gisselquist, 1977). Amyot (1976) also stresses that “farmers tend to have stable relationships based on friendship and trust with specific individuals in their various roles and these relationships tend to be highly personalised” and shows the importance of trust in money borrowing and marketing operations.

¹¹² Probed on what would happen if some land owner should baldly displace his tenant to give his land to another one at higher price, villagers answered that the landowner would disgrace himself in front of the village and that “should the new tenant belong to another village, he would not dare come to harvest the plot”...

and Kikushi (1981) also stress the peculiarity of what they dub a “personalised market” with a high degree of social interaction. “In such an environment it usually entails a significant cost to violate time-honoured village rules. Even if one expects large material gains from violating the rules, he may not dare to do so because of the risk of social opprobrium and perhaps ostracism”.

As for absentee owners, they are vulnerable because of their lack of link with the community and they are known to be lenient rather than aggressive (see earlier section). This was already perceptible in the 60’s regarding the Bangkok based landlords: their leniency and the low rents demanded show that they had already given up their interest in maximising their rent. This can be attributed not only to their physical and social distance from the village but also to the growing value of land itself, which provides a return to capital which totally offsets the revenue of the rental. More generally, this can be ascribed to a growing range of opportunities for capital investments which were surfacing at that time. While in 1902, at the time Chao Phraya Thewet was writing to the king that “it is difficult to find a more profitable undertaking than owing and renting land” (Johnston, 1975), being a landlord was a highway to wealth, this has gradually ceased to be the case: rents, at least since the 1930 crisis, have not offered significant revenue and the attention of urban elites, from the post World War WII onward, was definitely geared towards other sectors. An example of stability is given by the landlord area of Chachoengsao Province, on the East Bank: although contracts are year by year¹¹³ (but most often written), families often farm the same (landlord) land for generations and their “right” is transmitted to their descendants¹¹⁴. Such cases of “*hereditary tenants*” have also been reported by Bunjongjit (1987) in the eastern part of the delta.

The case for Bangkok landlords, we believe, also holds for landlords residing in districts or provincial capitals, although their loss of interest probably dates from the late seventies. The farmers’ protests of 1974 have drawn attention to cases of abuse by some landlords (high rents, foreclosure), but may also have misleadingly suggested that the magnitude of the problems was that of a durable and fundamental landmark of the evolution of the agrarian system. These local landlords who had often thrived on money lending¹¹⁵ and accumulated land, later turned themselves¹¹⁶

¹¹³ This is said to be a consequence of the restriction which is imposed on contracts of a longer duration: farmers have the right to farm the land for another 6 years after the landlord announce his willingness to get the land back. To evade this constraint, they prefer to establish year-to-year contracts.

¹¹⁴ Should some farmer desire to cease farming for some reason, he would keep on paying the rent to his landlord, while subleasing to some relative or neighbour. It is to be noted that sub-leasing does not lead to a “sub-market”, and farmer who resort to it do not increase the rent.

¹¹⁵ Some village studies also suggest that successful farmers are active entrepreneurs with personal qualities (see for example Amyot, 1976; Visser, 1980).

¹¹⁶ or so did their children after achieving higher education levels.

to more profitable investments (transport, agro-industry, construction, etc), and moved away from the agricultural sector, often from the countryside to Bangkok. Excessive rents, as denounced in 1974, did not concern all the delta and were found specially in the flood-prone area where little intensification was possible on account of environmental constraints. We believe that the rent burden was chiefly a direct consequence of the extremely depressed rice prices (farm gate prices bottomed down to 630 baht/ton in 1970/1971, the lowest real price since the hike of 1947 ! In 1972/73 extensive crop failures were registered) and of growing indebtedness which made the situation unbearable for many.

Short term contracts also appear to be consistent with hectic rice prices; tenants are not willing to commit themselves for a long period in which profitability could turn out to be low and risk high. Amyot (1976) notes that tenants would also consider from year to year whether they had the capacity to operate the rented land and could terminate the agreement if they judged that the plot was eventually too far or not fertile enough.

The rental arrangements appear to be best characterised by their stability, rather than their precariousness. This is asserted by most village studies (see in particular Fujimoto (1987), who recorded “no serious complaint from tenants” and see tenancy relations as “relatively stable and secure”) and is confirmed by our three villages studies.

6.5 Land rental and legislation

During the time of the rice boom, tenancy did not appear as a problem per se, because of the very nature of the colonisation of the delta: rather, it was the prime aspect of land ownership which constituted the core societal issue. With the implementation of the Land Registration Department in 1901, the legal possession of land came to be conditional upon having a title deed issued by the Department, including a cadastral map. In parallel, a new land taxation was established and applied in 1905 (see Ingram, 1971). The system was gradually applied, as it took some time to carry out the cadastral surveys; it also required some years to limit abuse from the section of population who were in a position to take advantage of the system. Kaufman (1960) reports that “many wealthy Bangkok merchants seized this opportunity to buy up and register large tracts of land, which they then sold at two baht per rai to the farmers”. The Consolidated Land Act of 1908 does not specify any limit in landownership but a right to cultivate as much land as one can “turn to profit”.

The Civil and Commercial Code of 1929 is apparently the first legal act to state that rentals must have written contracts, and that a three-year term had to be met by an official registration (Banternng, 1985). The 1932 coup brought about important

changes (abolishment of head and land tax in 1938, fixed limit on landownership and prohibition of the confiscation of the assets of bankrupt peasants (Chiengkul) but did not directly address the issue of tenancy. The 1936 Land law stipulates a ceiling of 50 rai and grants ownership to a farmer after three years of cultivation of the land.

Kaewthep (1986) reports that in 1949, under the regime of Phibun, farmers from Nakhon Pathom and Samut Sakorn petitioned the government against the loss of their land to a big landlord of this region. This contributed to prompting the promulgation of The Act Controlling the Hire of Paddy Land (1950) and, four years later, the Land Code (1954), which fixed the limitation of land ownership to 50 rai (clause to be abrogated by Sarit in 1960).

The 1950 Act prescribed “fair” rent ceilings which were judged “unrealistically low” by some (Wagstaff; 1970, because “the rising value of land had inflated rental rates”) or “reasonable” by others (Seth, 1970c). Such differences probably reflect the point of view adopted (the market reality or the subjective ideal equity level), but the “fair” ceilings were fixed according to the yield and actually far below what was observed at the time:

- 10 *thang/rai*, if the yield is over 40 *thang/rai*
- 6 *thang/rai* for a yield of 30 to 40 *thang/rai*
- 3 *thang/rai* for a yield of 20 to 30 *thang/rai*
- 1 *thang/rai* for yields lower than 20 *thang/rai*

Other clauses stipulated that the minimum lease period should be 5 years, that a reduction of rents should occur in case of crop failure, that rents were not due before harvest and that rental contracts might be cancelled only for reason of non-payment of rent, subletting by the tenant, cultivation of less than 70% of the land, or if the owner decided to cultivate the land by himself (Tantikul, 1972).

Between March and November 1974, Bangkok witnessed farmers demonstrations fuelled by demands concerning indebtedness, land loss and low prices for rice. The majority of the demonstrators actually came from the North and the “upper Central Plains” (Pichit, Kamphaeng Phet, Pitsanulok, Petchabun, Nakhon Sawan), where landlord/tenant conflicts appear to have been the most significant¹¹⁷ (Suehiro, 1982; Ramsay, 1982). Those coming from the delta were generally farmers of Ayutthaya, Ang Thong and Sing Buri provinces, not fortuitously regions partly included in the flood-prone area. The movement centred on seven demands, including the establishment of a minimum price of paddy at 3,000 baht/ton, the limitation of ownership to 50 rai (100 in the Northeast), the enforcement of the 1950 Act, support

¹¹⁷ Out of the 35 cases of murder of rural leaders inventoried by Kaewthep (1986), only three refer to leaders from the Central Plain (while Chiang Mai Province comes first with an appalling total of 15 cases).

for the redemption of land by farmers and several measures concerning farmers who had lost their land through indebtedness.

Another Act Controlling the Hire of Paddy Land was enacted in 1974, a mere revamping of the 1950 Act, imposing some rules, most specifically on the maximum amount of rent charged (10 *thang*, or about 1/4-1/3 of total produce) and the minimum length of contracts (increased to 6 years). Admittedly the law – again - was little enforced and ended up as ill-fated as the preceding Act¹¹⁸, while “rents and leases continued to be regulated by custom, not by law” (Lin and Esposito, 1976). According to Chiparanda (1983), the Act is also likely to have been counterproductive and to have contributed to a decrease in tenancy. Regulations may have pushed landlords to both get rid of their tenants and hire them for farm operations, entering into an employer-employee relationship instead: “thus, rightly or wrongly, the Act tended to discourage and, even worse, disguise tenancy”.

In 1981, the Agricultural Land Rent Act covers farm land of all types but brings little novelty except the fact that the *tambon* committee is now empowered to fix a maximum rent based on local soil quality; rents are not due in case of disaster, the duration of contracts is set again at six years and tenants can reap what they have sown in all cases (Banterng, 1985). Chirapanda (1998) holds that during the land boom of the late eighties the legislation was easily bypassed and somewhat detrimental as “land speculators avoided the farm rent control Act by holding the land idle and ready for immediate sale”, adding that “the cost of having the land idle is almost nothing, because land taxes are very low”.

A few commonalities can be observed along this chronology of legal acts. The first point is that they have stubbornly failed to produce the expected results. This appears clearly in the fact that their content is by and large identical. The second is that they all presented some loopholes which were easy for landlords to evade. The most important was that the landlord’s claim that he wanted to cultivate the land by himself was enough to recover the land and this was tantamount to a mode of ejection of tenants. The limitation of landownership was also evaded because the Codes were referring to individual rather than family ownership and landlords could deal away with it by distributing their holdings among their family members (Suehiro, 1982; Seth, 1970c).

Three additional observations can be made on these legislative efforts. First, regulatory interventions by the state are always difficult processes which are rarely met with success. In many instances, it can even be said that laws have had an

¹¹⁸ In a later publication (1998), Chirapanda reckons that the Act, even under its revised version of 1981, “has yet to prove its effectiveness in practice” and bluntly considers it a “dead letter”.

adverse impact on tenants. Aiming at controlling landlords, the laws often pushed them to protective attitudes, not the least being ending contracts which could have threatened their interests. Similar counter-effects were observed after the law of September 1932, which prevented the seizure of the farmer's crop and cattle for debt, attempted to give him more security. "The general result was more harmful than beneficial as it dried up the sole source of the farmer's credit" (Thompson, 1910).

Secondly, the different Acts, geared towards controlling the different aspects which might result in the domination of landlords, have ended up with a long and heavily bureaucratic list of measures and clauses. The reform were putting a heavily burden on local administration, already expected to carry out sensitive assessments of the quality and value of land every 4 years (for the purpose of land taxation), to assist farmers in their dispute, to keep records of lease contracts, etc. which at best overestimated the capacity of officers and their independence from the local structure of power.

A last observation can be made regarding the rather coarse vision underlying these regulatory attempts. Worked out in times of crisis, they were based on the "valid assumption that tenants in general are the weaker party, that they are apt to succumb to pressures of powerful land owning interests" (Seth, 1970c). Retrospectively, one is puzzled by the simplicity of the data gathered by the different surveys of the 60's and the lack of a richer anthropological background which could have allowed a more qualified interpretation of tenant/owner relationship¹¹⁹. It is of course understandable that the debate at those times was couched in more political terms, with a sense of urgency derived from the regional political context and from growing farmers complaints. With hindsight, however, a more balanced perspective can be adopted, in which both the social dimensions of tenancy and the fluctuating "terms of trade" between tenants and landlords find their place. This is attempted in the following section.

A consequence of the prevailing vision was the lack of understanding of the risk-sharing aspect of sharecropping and more generally of the protective nature of patron-client relationships (Scott, 1976; Piker, 1975). This authorised well-intentioned recommendations to enforce fixed-cash rents or to "interpose between landlords and tenants either a state agency, cooperative or other suitable farmers' organisation", in order "to break the landlord-tenant nexus and thus facilitate implementation of the rent regulations and other tenancy provisions" (Seth, 1970b). While righteously aiming at controlling imbalances of power, there is little evidence of any success achieved.

6.6 Landowners-Tenants: changing “terms of trade”

6.6.1 Depressions and prosperity

What lessons can be drawn from the observation of tenant/landlord relationships along the XXth century ? We can schematise their evolution by fathoming the successive crises undergone by the delta, together with the relatively prosperous interludes observed in between.

During the early years of East Bank development, say 1880-95, “landlords who invested in the area had been forced to compete among themselves for the limited number of available tenants” (Johnston, 1975). Many offered to collect no rents during the first years of cultivation, especially when land needed to be cleared and the trees fallen. Farmers “were usually treated sympathetically by landlord and *nai kong* (overseers) alike” (Johnston, 1975), who were also reported “to be kind to the farmers” (N.A., Rama V, KS. 3.1/11). Labour was lacking and wages were rather high, especially when compared with the price of land. This situation dramatically emphasises how, a few years before the total abolition of bondsmanship, the nobility had already lost most of his power on its retainers.

This imbalance proved to be short-lived as, by the late 1890’s, the flow of tenants to the East Bank was high enough to revert the situation, one landlord later recalling that aggressive tenants “bid against each other for this rich land” (cited in Johnston, 1975). This gradually shifted the terms of trade in favour of the landlords and the 1905-1912 depression, mostly due to a series of catastrophic climatic years, brought an end to euphoria, critically straining the relations between landlords and tenants.

Landlords, for some time, still resorted to old reflexes of bondsmanship and bet on the hardship and difficulties affixed to mobility in order to retain their tenants or labourers. Debts¹²⁰ also were an indirect way to attempt controlling labour. In a bid to stabilise their income at the expense of their tenants, landowners left farmers with under-reproduction levels of income and eventually triggered a flow of emigration, indirectly fuelling the reclamation of the delta. They also ended up *undermining their*

¹¹⁹ The first in-depth village study known to the authors which has addressed the topic was published in 1977 by Gisselquist and attracted little attention. Even the abundant former anthropological work on patron-client relationship was not brought into the debate.

¹²⁰ “Some didn’t have enough rice to pay for expenses and wages for hired labours, while others didn’t have enough money to pay for both the rent and interest and thus accumulated further debts to the point where some had to sign contracts selling themselves to the landlord thus becoming perpetually tied to the landlord, and to insure their bondage, were forced to send both wife and children work for the landlord as well. Those landlords who are strict in their dealings would confiscate the farmer’s animals and farming implements in lieu of rent payment, and in addition would force the farmers to enter into contracts making them their own animals and implements” N.A., Rama V, KS. 3.1/11

own interest because, as it became apparent a few years later, they had gone as far as to invert the terms of trade: many, by 1910, “watched helplessly as the fields [left uncultivated] were encroached upon by elephants again, which were driven out some years ago” (Johnston, 1975) and had to offer land to rent for free, provided that the tenant would pay the land tax. What came in the limelight was the limitation of the landlord’s bargaining power because of the possibility for the tenants to just migrate to new lands, should they find their situation unbearable or unacceptable.

This, in fact, was observed in the succeeding years, farmers receding in unexpected numbers, prompting a reversal of the migration trend and a decrease of the population (by 40% in 6 years in the Thanyaburi district !). It is worth noting that these observations apply to the East Bank, as tenancy is believed to have been rather limited, at the beginning of the century, outside the landlords area.

A slightly different scenario occurred 20 years later, after the World Depression. With a slump in rice prices by 40%, tenants who were indebted, because of the purchase of additional farmland¹²¹ or other reason, were caught in disarray. While the first crisis was mainly due to excessive internal euphoria and climatic vagaries, the second depression evidenced the vulnerability of the rice economy to the world demand and price of rice. However, it seems that the terms of trade before the crisis had not swung back in favour of the landlords: the reclamation of the delta had proceeded and, with the exception of some areas with older settlements in which some congestion was already felt, there was still land available in many parts of the region and landlords were probably increasingly helpless to control their tenants¹²².

Evidence of this is apparent after the crisis. While in the first depression landlords had stiffened their position and shown little flexibility, in the post 1929 period, “there was a move hardly voluntary on part of the landlords to reduce land rentals proportionately to the declining price of paddy” (Thompson, 1941). In Ang Thong, “in 1931, farm renting declined and sharecropping contracts were made instead with the land-owner generally getting half the amount of rice because rice prices were uncertain. It was learned that farmers would not pay the rent in cash any longer unless the land-owners charged lower rates which farmers could afford to pay” (Prince Burachat, 1932). Another hint at the limited coercive power of landlords can

¹²¹ “In normal times when rice prices were good (...) the farmers in Ang Thong earned sufficient income to support themselves. They had also more possibilities to expand their base of cultivation. Although some were heavily indebted mainly because of the purchase of additional farmlands to expand their cultivation base and because of the payment of interests at a rate higher than fixed by the law, they were able to repay their debts in a few years thus suffering no financial troubles” (Prince Burachat, 1932).

¹²² “Tenants are able to select lands at will. If a tenant becomes dissatisfied, he may pack up and move to rent another plot, because there is much vacant land. Some tenants need not even pay rent. After farming a plot, they simply desert it. The landlord lives far from his fields, and is not aware of these events. Only when he is required to pay the land tax in place of the tenant farmer does he discover that someone farmed his land without his permission”: an official in 1926, cited by Johnston (1975).

be got from Andrews (1936) who states that tenants did not re-negotiate contracts because “they knew that if they didn’t earn the rentals, no power on earth could make them pay what they did not have”.

Even the bargaining power of money lenders does not seem to have sufficed to protect their interest. The law passed in September 1932, aimed at preventing the seizure of the farmer’s crop and cattle for debt, encouraged defaulting, with part of the prejudice borne by medium scale farmers, often slightly less poor than their debtors (Andrews, 1936). Johnston (1975) holds¹²³ that, contrary to common belief, land foreclosure was more common before the crisis than after, as in the face of falling land values in Ang Thong, debtors were occasionally found in the usual position of urging creditors to foreclose on land mortgages (...) while “creditors were therefore forced to be content with occasional and incomplete interest payment ! (...) Creditors who had accepted mortgages on rice land as security against loans in the 20s were now reluctant to foreclose on them because land values had fallen far below the amounts of the original loan and *because most would have been unable to turn the land to any profitable use*” (emphasis added). This last remark is essential: owning land of decreasing value, without the proper labour force to farm it, in a time in which no one is willing to pay rent because of the low profitability of rice is useless. This stresses the limitations landowners are likely to experience in times of depression, a situation reminiscent of the first depression in which landlords soon found their fields deserted.

Regarding the situation on the East Bank, Zimmerman (1931) describes the same precariousness reported at the beginning of the century, with tenants who often “do not pay the rent or the taxes if they can move away to another place”. This description is echoed by many later observers (ESCAPE¹²⁴, 1955, Thompson, 1941; Pendleton¹²⁵, 1962). Moving away remained the main available option for tenants to evade debts and exploitation. It is no wonder, therefore, that the Rangsit area as described by Zimmerman was in a poor state, with very low productivity and few permanent settlements.

This takes us to the stagnation period of the sixties and early seventies, which will be analysed with more details in the following chapter. Farmers’ protests concentrated on the price of rice, tenure security (but mostly out of the Central

¹²³ Probably partly based on Prince Burachat (1932) and Andrews (1936) who also records few foreclosure and notes that “low prices for crops made it undesirable for landlords to foreclose on secured landholdings in general”.

¹²⁴ “Often, when the crop is bad and the tenant is unable to pay the rent, etc. he may simply leave the village and migrate to another place”.

¹²⁵ “If the Rangsit tenant sees no chance of a fair harvest, he and his family may abandon their lease and slip away to Bangkok in their boat. There they will leave in their boat and work for wages, perhaps returning at some later time to Rangsit to rent another piece of land from another landlord”.

Plain), and indebtedness. Several factors can be brought up to explain this period but it is basically the taxation policy of the government which worsened both the relative level of rents and the vulnerability to price fluctuation, by extracting the margin of benefit which would have served to cushion farms against adversities.

What were the relationships between landlords and tenants during this period? It seems that, somewhat similarly to the 1905-12 depression, the "terms of trade" had moved in favour of landlords, which often also extended their grip on the peasantry through money lending and their resulting indebtedness. The unexpectedly high percentage of 48% of written rental contracts found in 1964 (5 provinces), is probably indicative of growing tensions demanding more security in contracts. The reason for this imbalance must be traced to the growing pressure on land (the out-migration to the upland frontier observed in the sixties was waning; labour was available in excess) and to the appreciation of land further to the implementation of the irrigation system. There is also evidence of active, and sometimes violent, resistance from their parts to the 1974 Act on tenancy and to the Land Reform as a whole (See Turton, 1978; Keawthep, 1982). There is little information on how the land system eventually responded to the crisis but several concomitant factors eventually brought relief to the delta agrarian system (see next chapter), soothing the tension on the land market.

Regarding the last two decades, a relative equilibrium has prevailed in the land rental market. Again, spatial heterogeneities are paramount, depending on the population density, the availability of other job opportunities, and the productivity of land. In addition, the demand for land is closely correlated to the price of rice and adapts rather quickly to it. Two events must be mentioned still.

Severe floods in 1995 resulted in the loss of most of the rice grown in the flood-prone area. In 1996, floods struck again the area, though causing less damage. In 1997, early abundant rainfall triggered land preparation and sowing but a later dry spell led to the loss of the seedlings. Farmers had to sow again, with an increased risk for the lower parts, some of them ending up being submerged before the new rice had grown sufficiently. This series of climatic hazards, despite the limitation of the risk brought about year by year by the construction of adequate dikes, had a dramatic impact on the most fragile environment of the delta. Even though rents have not been charged by landowners, tenants and some owners alike have just given up cultivation, as a consequence of the combination of crop failures and low profitability. With a vanishing enthusiasm in engaging in rice-cropping, the rents in the flood-prone areas have often been adjusted downwards.

A last word must be said about the 1997 economic crisis, although there is little indication so far of its impact on the land rental market. With the rising prices of rice observed in the 1997-1999 period, it was expected that some farmers would take back their land in order to cultivate it by themselves and fully take advantage of the

better situation. Such a situation was observed consecutively to the surge in the price of rice in 1918 (Hanks, 1972) and, possibly, in 1973. It is hard, however, to estimate the magnitude of the shift; observations suggest that it has been rather limited, in particular because the greater part of the land in the rental market is now supplied by landowners who are not farmers any more and are therefore not confronted with this choice (see § 7.5.2).

From the above brief historical account, we may derive a more balanced vision than the impression conveyed by the sole periods of crisis, which are naturally more documented. It appears in particular that the bargaining and/or coercive power of the landed/capitalist class has been dramatically restricted by: 1) the land frontier, which provided an ultimate solution to utmost and desperate indebtedness and exploitation; 2) their inability to cultivate their land by themselves, partly derived from their lack of control on labour, be it through wage labour or not. The rural proletariat has never been poor/numerous enough to be forced to labour, nor was the social power and political backing of the landlords of any coercive nature, as it was the case in some colonial countries. Power through debts has its limits too, and is sometimes evaded when laws encourage foot-dragging, or is diminished when land loses its value as collateral. All this points out to a relatively balanced relationship, albeit for a few periods of history, when more lopsided terms of trade materialised, before being re-balanced by a new crisis.

6.6.2 Note on capital accumulation

This historical review also allows some generalisation on the vulnerability of farmers and capital accumulation. In a highly uncertain environment, with crop failures provoked by the lack or the excess of rain, farms with little capital are doomed to incur debts and, therefore, to increase their vulnerability to the next whim of destiny. Scott¹²⁶ (1976) has convincingly shown how such risk could eventually offset even relatively high average incomes. Agriculture is an activity characterised by its risk and, by contrast, all other activities not subject to natural vagaries, may have a greater potential for accumulation. Those engaged in mining, commerce or transportation may see their benefits affected by market changes (generally mid or long term price evolution) but, in general and in the long run, their activity remains little affected by year-to-year vagaries. They can plan activities and investments with more certainty than most farmers and it is not surprising, therefore, that the odds are in favour of their accumulating and their “naturally” ending up as money lenders, providing cash to those farmers whose crop has failed and who are deprived of it.

¹²⁶ See also Andrews (1936): “Many land rental demands in the intensively irrigated districts of Central Siam are based on years when both crops and prices are good: they are unduly high for years when prices are low, and result in a great cumulative indebtedness which, probably, will never be paid off in full. The rentals should be investigated and equated for each year and each district with the crop returns per rai of land”.

Regardless of whether the former takes advantage of this situation to exploit the latter, *uncertainty* in climatic conditions and agricultural production *tends to generate* a flow of capital from the agricultural sector to the non-agricultural ones. Reduced to a trickle in years of abundance¹²⁷, this flow may turn critical when successive years of failure occur. The same phenomena also favours farmers with enough capital or with better endowment, who can better weather these fluctuations, and may lead to their accumulating land.

In addition to this exposure to climatic hazards, a commercialised economy like the delta's rice economy is at the mercy of vagaries in price, partly due to its degree of integration to the world export rice market. Although it is partly incorrect to assess this fact based on the series of actual values¹²⁸, it seems that the fluctuations in the price of rice have increased more or less at the time in which agricultural production in the delta was stabilised by increased water control: the early seventies.

While this phenomena of farmer differentiation and the possible "autonomisation" of a local capitalist class have long been well identified, a very important point must also be emphasised here: if general economic conditions offer an increasing scope for higher returns out of non-agricultural investments, big farmers will then tend to move out from agriculture, both locally and to urban centres. This contributes to preventing the emergence of a *rentier* class of landlords, thriving on the large land they have accumulated, either by leasing it or by controlling wage labour. In economies with urbanisation and industrialisation on the run, such economic returns may soon turn comparatively unattractive and accumulating land may cease to be an option, except in places where it is kept as a speculative asset (near cities and main roads). This point is helpful in explaining the evolution of the last 30 years.

6.6.3 Note on spatial mobility and tenancy

Population pressure on land appears to have been extremely spatially heterogeneous. Why corresponding gradients did not prompt population flows able to compensate for such imbalances must be understood in the light of the huge heterogeneity of several main factors governing geographic mobility. Let us review the range of opportunities and constraints prevailing at the time:

- Moving to virgin areas first implies the existence of means of *transportation*. In the context of the delta, most of the time this meant the existence of a canal which would not dry up for too long a time. It is well known that the first major canals

¹²⁷ Although there is a steady rate of indebtedness also due to personal behaviours (addiction on alcohol and most especially gambling) which is obvious in the countryside.

¹²⁸ Some of the fluctuations observed embody inflation rates. Deflated series also tend to support the hypothesis that prices were more stable during the 1900-1970 period than after 1970, but inflation rates before 1965 are little reliable.

were dug for purposes of transportation, providing at the same time embankments where homesteads could be more safely accommodated. These means of transportation were also of paramount importance to exporting the rice surplus produced in the area. When the canals of the Rangsit scheme silted up, main boats could not reach the area and a costly system of transportation in several stages had to be set up. Well known too, are the cases of rice boats which became stranded in canals and were ransacked by bandits (see Warington Smyth, 1898).

- The second main constraint was the inhospitable nature of the land frontier and the high *risk and hardships* affixed to those who chose to head for it. These included wild animals (not least elephants), malaria and widespread *dacoits*, as appear in many dreary descriptions (see Young, 1889; Thompson, 1910; Kaufman, 1960¹²⁹; Johnston, 1975; Molle, *forthcoming*).
- Other constraints also included the lack of *capital* to start farming by oneself (Thaveesilp, 1978). Although few implements were necessary, boats, ploughs and buffaloes were too scarce and tenants often lost them to their landlords. The cost of one buffalo fluctuated between 50 and 100 baht during the 1900-1930 period and was therefore not negligible; capital was also sometimes needed to pay for canal digging (Thompson, 1910).
- From the *settlement* point of view, some areas also had greater attractiveness because newcomers were welcome by the first settlers, while in other parts the latter were taking advantage of their situation to exploit the new farmers coming in the area. Some areas offered better security of land tenure, while others were within the reach of Bangkok-based landlords. Migrating had to be weighed against the relative security of access to land one farmer might have already achieved as a member of an already settled community.
- A last constraint was attached to the *conditions of water* of the newly reclaimed areas. Hanks (1972) has well described the trial and error process of the land frontier. Some areas, after being cleared, proved to be too high and were not satisfactorily reached by the flood water; they were thus abandoned or kept as

¹²⁹ "The migratory pattern, in general, was as follows: The husband, wife, and older children would try out the new land for a year or two, and if successful, would send for the rest of their family. In those situations where the old property was first sold, the younger children and elderly members of the family stayed with relatives (...). The dense jungle foliage was cleared away by the slash-and-burn method and the rice then planted by broadcast sowing. Great hardships were suffered during the first years. Between 20 and 30 per cent died from dysentery and malaria alone. Mosquitoes were so numerous that meals had to be eaten under a net. Floods wreaked havoc in the field; elephants occasionally trampled the crops; and weaver birds ate up great quantities of the maturing rice. Many a year, the yield was not sufficient to sustain the family until the next harvest. Several families abandoned hope and went back to their previous homes for several years, only to return and try again. Inasmuch as there was no registration of property at this time, the returning farmers in many instances found the land which they had cleared now occupied by others. There remained but two alternatives: clear a new plot or return once again to their Thonburi homes. For those who had sold their original farms, there was no alternative".

pastures for cattle and buffaloes, while pioneers were moving further afield to seek “low-lying areas for the centre of their fields”.

- Eventually, the decision to move had to be weighed against the advantages and drawbacks of the actual conditions: for a tenant on the East Bank, this was dependant on his relationships with his landlord (or with the *Nai Kong*), the amount of the rent, the possible reduction in case of crop failure, his level of indebtedness, etc.

The combination of all these spatially distributed constraints eventually translated in flows of migrants, submitted to quick recomposition as the magnitude of all these incentives and deterrents were redefined. A new canal could be opened here, while banditry could develop there; too many settlers were to be found in one area, while another was offering virgin land. Spatial mobility, thus, was constantly shaped by different constraints and costs, generating a complex and fluctuating mix of push and pull factors. This is best exemplified by the Bangkok Times (1909), reporting on tenants fleeing from their land lords on the East bank: “Many of these people went over to the West side of the River Chow Phya, where there are no ‘very high rents’. But they soon found that the silted canals in the Rangsit district were much better than no canals at all, as is the case at present on the West side. The water supply was very bad, and they failed to make ends meet, and besides they said the *dacoits* on the East bank were a joke to what is to be met on the west side”.

The complexity underlying this tentative model of the colonisation of the delta may not be helpful in building up a detailed vision of the situation at that time, but it does help us understand some contrasting or conflicting aspects of the reclamation of the delta. In particular, it accounts for the apparent paradox of having farmers accepting work as tenants, or wage labourers, while virgin land was available to them. For many a farmer, Rangsit may have been not an alternative but the “best of the bad solutions”, sometimes a transient one on the way to a furthest frontier. Gaining more hindsight on the colonisation process appears problematic because of the extremely scarce information relative to the *silent frontier*.

7 Restatement of the problem

The large amount of data gathered and presented above must now be summarised, put in context and interpreted. Firstly, a summary of historical evolutions is proposed, followed by an assessment on how this evolution pattern relates to main theoretical frameworks. A third section will endeavour to interpret the processes at work conducive to the quantitative changes observed in land tenure. We will then turn to the question on whether the land system “performs” well and to the characterisation of its linkage with other factor markets.

7.1 Abridged chronology

During the second half of last century, the increasing economic value of rice gradually turned land to a coveted good and the object of conflicts between the crown and the nobility. In 1886, the court converted the traditional occupancy right into property right by ruling that certificates of land tax payment amounted to a proof of ownership (Phongpaichit and Baker, 1997). Faced with an increasing acquisition of land by the nobility, the king’s decree of 1877 attempted to discourage speculation by stipulating that idle land would be reverted to the government after 5 years and that a part of the newly reclaimed land would be allocated to farmers. In 1896, the king attempted to do away with the allocation of ownership based on tax payment, and a system of land registry was gradually established during the first decade of this century.

Following the abolition of bondsmanship, the lack of capital and high risks in the land frontier pushed many farmers to accept dependent arrangements in Rangsit and other large scale reclamation areas around Bangkok. After World War I, the expansion of rice cultivation was increasingly achieved by individual *de facto* owner-farmers clearing new land in the delta’s *silent frontier*. Tenancy, mostly restricted to areas formerly seized by officials and the nobility, around Bangkok and on the East Bank, probably tended to decrease in relative terms until some saturation, firstly felt in portions of the core of the delta, surfaced in the late 20’s. The percentage of tenanted land started to increase, alongside a gradual closure of the delta frontier and an increase in population density. Around 1930, this process also materialised by a turning point in rice techniques, transplanting and more intensive cultivation thus re-gaining momentum (Hanks, 1972; Molle, forthcoming). In the early 30’s too, following the world crisis, indebtedness rose, while rural standards of life underwent some decline. Some programmes of land redistribution were even initiated at that time.

The war and postwar periods were characterised by a lower demand for land (Ingram, 1971), probably as a consequence of the dislocations in the population and the collapse of the rice export market (during war time, a ton of rice averaged 86 baht in Bangkok's market, while it was worth 375 baht in 1946 and 783 baht one year later. This is reflected in lower rates of tenanted land (Ingram, 1971). With attractive profits in sight, owners also tended to farm their land by themselves. Significantly the FAO report of 1949 entitled "Thailand and her agricultural problems" does not provide a single reference to the question of land tenure.

In the mid 1950's, however, population pressure built up and rapidly brought about a higher rate of tenanted land together with high rents. Saturation was particularly felt in older settlement areas, around Ayutthaya and in the southern delta, as evidenced in Bangkhud and Bang Chan studies¹³⁰, both near Bangkok. Surveys carried out in Lop Buri, Ang Thong and Sing Buri in 1952 confirm that tenancy had increased in relation with pre-war levels (Tomosugi, 1969). This trend was to be reversed only in the early 1970s (after reaching over 50%). An important benchmark was also the rapid process of land titling from 1955 onward, which gradually curtailed the control of local leaders over land. More generally, this period showed more and more local government power shifting to the local districts (Police, Land Office, etc).

The sixties were a period of both enthusiasm and uncertainty. The Greater Chao Phraya Project was implemented but technological stagnation endured and its first impact fell short of expectations (Suvaphorn, 1975). Stagnating productivity and benefits were curtailed by the rice premium, depressed international markets, high rentals fees, while incomes decline with the increasing population pressure. The 1960's were also affected by the Yellow Orange rice disease and yields were seen stagnating. Debts accumulated on those who had invested in on-farm development (in order to reap more benefits from irrigation water) or in land (anticipating it); local moneylenders were thriving, especially in the flood-prone area (Ayutthaya), where indebtedness was more critical. This drove some farmers to sell all or part of their land and to become, together with other landless people, the first candidates to join the upland crop expansion in Lop Buri, Petchabun, Kamphaeng Pet, Kanchanaburi or other provinces: promising international prices and appropriate mechanisation, malaria control and road construction programmes¹³¹ triggered the expansion of corn, kenaf, cassava and other crops in the uplands. These moves significantly relieved the deadlock experienced in the delta but not sufficiently to revert a situation

¹³⁰ Janlekha (1955) writes that a "condition of over-population has reached the point where it not only affects the per capita income of Bang Chan residents but actually exerts pressure on the means of subsistence".

¹³¹ Between 1947 and 1973, the total kilometres of roads increased threefold from 6,655 km to 18,672 km, including 70% of paved roads [Ramsson, 1977].

of Ricardian stagnation. Significantly, around 1970, the land/man ratio for the Central Plain and the bordering uplands starts to decrease again (Molle, forthcoming).

In the 1965-1975 interval, the international context, with communist guerrillas thriving on rural mass poverty and inequalities, raised concerns about land tenure conditions in the country. Most predictions were gloomy: the average population growth rate was 3.2% *per annum* and the upland frontier would be nearing exhaustion in a few years. Politics, decision-makers and scholars discussed the urgent need of population control and of the development of non-agricultural sectors to absorb the excess of rural labour “so that pockets of discontent and subversive insurrection will not appear...” (Wagstaff, 1970). Not the least, rice prices were still depressed (slumps of rice prices occurred in 1969-70-71, followed by a year of flood¹³²) and a significant share of the wealth was transferred from rural to urban areas through the mechanism of the rice premium (Usher, 1967; Manyanoudh, 1973; Siamwalla and Setboonsarng, 1989). At the national level, the country was also affected by the withdrawal of the American presence and financial aid¹³³ and by the devaluation of the baht.

Peak tensions at that time, probably also mirrored by the high percentage of written rental contracts (48% in 1964), culminated with a sprout of demonstrations in 1974, in Bangkok, conducted by farmers protesting against high rents and confiscation of farmland by moneylenders (Ramsson, 1977; Kaewthep, 1986). The ALRO (Agricultural Land Reform Office) was also established in 1975 under these circumstances. In 1975, the Kukrit government sets up “the Tambon scheme” and released budget to be spent at least 50% with hired labour.

In the later part of the 1970's, several relieving factors started to surface: while out-migration to Bangkok was still driven by industrial development and job opportunities outside the agricultural sector were growing, rice cultivation underwent a drastic process of intensification (introduction of High Yield Varieties, double cropping, on-farm and drainage improvements). The stabilisation of the agricultural production through land development, water control (including dams allowing dry-season cropping) had significantly reduced the risk which prevailed well until the 60's. Even water control in the flood-prone area was gradually increased (Molle et al. 1999). Improved access to capital markets from 1970 (but most especially from 1975 onward, regarding the use of mortgage), an increasing degree of mechanisation and a class of wage labourers also brought increased flexibility to farm operations. In 1973, rice prices soared and remained relatively high until 1980. Gisselquist (1977) observed that rising incomes due to higher paddy prices and double-cropping had

¹³² with the lowest real price of the 1950-2000 period observed in 1970.

¹³³ American aid, from a 600 million US\$ peak in 68, was reduced to only 7 million in 1976 !

caused some decline in forced land sales due to debt and stabilised the landholding population in the area. Double-cropping also brought a variety of new requirements which absorbed both local labour and farmers investments: on-farm improvements (ditch, grading), equipment (the mechanisation of land preparation gave more flexibility to calendars; axial-flow pumps), chemicals and fertiliser.

While the last twenty years of intensification have allowed some parts of the delta to clearly accumulate, and to increase farm equipment, others which have been partially or totally deprived¹³⁴ of water supplies in the dry-season stagnate or tend to regress. While some observers emphasise the socio-economic differentiation brought about by the green revolution (despite limited evidence of it¹³⁵) it is, rather, the access to water in the dry season which nowadays appears as the main factor of differentiation.

During the last fifteen or twenty years, the land system has gained stability because of the levelling off of the agricultural population (out-migration, development of non-farm activities, fertility revolution). The regression of the land frontier (net loss of agricultural land), however, and the continuing division of properties, entail a reduction of the average farm size. Land speculation also results in a gradual transfer of landownership to urban strata. In many instances, intensification and diversification largely offset the diminution of the cropping area but spatial disparities are evident. A class of rural wage labourers tends to be on the rise. Multiple activities, though precarious, tend to reduce hardships but the successive disappearance of transplanting and the mechanisation of harvest have significantly curtailed labour opportunities. On the other hand, a growing share of inactive old farmers and all-leasing holders still contributes to the supply in the land and land rental markets.

This overall evolution, however, show some variations depending on the sub-areas of the delta. Our 6 provinces do not allow us to fully capture spatial heterogeneities nor do they cover the whole delta, but their differences are believed to be significant and meaningful. Here is a brief account for each of them:

Pathum Thani: Pathum Thani includes the north-Rangsit area and is therefore conditioned by the corresponding peculiar historical circumstances of colonisation. It retained its feature of prevailing tenancy, found as high as 95% of the total land by Zimmerman in 1930, decreasing after WWII and on the rise again until 1973 (74%). While its agricultural land is being rapidly converted to built-up urban areas (at an actual rate

¹³⁴ The uneven pattern of water allocation over the 1975-1999 period is under consideration in an on-going research project.

¹³⁵ While the adoption process has been slow around 1970, in particular because of low rice prices and because of the high cost of fertilisers, it has been quite fast after the construction of the Sirikit dam (1972) and the rise in rice prices in 1973. HYVs swiftly spread in most of the locations where water control allowed it; claims that the process has chiefly benefited large capitalised farms (or, like in Pakistan, even strengthened their power on land) seem inspired by the situation observed in some other countries rather than on local evidence.

close to 2% per annum, and 1.4% over 1963-93), owner-operated orange gardens have gained in relative weight and pulled tenanted land down to 44% in 1993. Full tenants now only make up 51% of the total farmers. Large farms over 60 rai have been the most severely cut. Since 1950, the average farm size has undergone a 50% cut, but the province still has the largest average farm size of the delta (31.3 rai in 1993).

Ayutthaya: This province is also characterised by large holdings (27.2 rai on the average in 1993) but, in contrast with Pathum Thani, it has not strayed from more than 10% from its value in 1950. This is attributable to its specific flood-prone environment which does not allow much intensification and its poor access to water in the dry-season. It has succeeded in maintaining this more or less sustainable average size because of high rates of out-migration, and local off-farm activities and industries. A slight decrease of middle-size farms has occurred alongside a significant emergence of large mechanised farms. The class of owner-tenant farmers, which gained dominance in the 70's, appears to have further waned, while full-owners now make up 45% of the total. The total tenanted land, on the other hand, has been rather stable during the last 4 decades, around 55%.

Ang Thong: With Ang Thong province, we shift to the other extreme of the average farm size range. This long settled province with varied agro-ecological environments was already the province with the smallest average farm size in 1950 (22 rai); It underwent further but limited fragmentation down to 16 rai in 1993. The share of tenanted land has always remained under one third and full owners between one half and two thirds. The small farm size is made possible because of widespread off-farm employment and home industry but is nevertheless worrying as intensification is limited in the flood-prone part of the province.

Sing Buri: Sing Buri Province shares some features with Ang Thong (average farm size of 18.4 rai; some flood-prone area) but the tenanted land remains 3 or 4% lower, between 26 and 32%. It appears remarkably constant over time. Full owners are widely predominant (70%) and full tenants have declined to 13%.

Nakhon Pathom: This province is now characterised by the smallest average farm size (15.9 rai against 26 rai in 1950 !) and by a [0-10 rai] farm class heavier than the [10-30 rai] one. This is strongly correlated with the growth of agricultural diversification. Tenure is correspondingly strongly oriented towards full-ownership (71% in 1993), in contrast with a percentage of only 47% in 1967, but the tenanted land, nevertheless, still amounts to 31% of the total land.

Suphan Buri: Suphan Buri differs from the other provinces in that its upland portion witnessed specific dynamics (with a different timing than in the irrigated area), which makes the analysis of data more difficult. Fragmentation is however being felt as the average farm size has lost 20% in 30 years, in line with the significant hike in the number of farms (while all other provinces saw a decrease in the absolute number of farm). Ownership grew with the land frontier, then declined to 51%, before rising again to 65%, with a current share of tenanted land at 28%.

7.2 Resilience of the delta agrarian system

The most far-reaching conclusion of this short retrospective is that the agrarian system of the Central Plain has, by and large, so far avoided falling in one of the main two ruts threatening land systems, and to which it has been doomed, from time to time, by some scholars. The first is the Malthusian threat of an increased division of farm land under population pressure, which ends up turning holdings non-profitable and/or unable to feed the members of the family. The second is, crudely, a Marxist based scenario in which class differentiation entails a process of elimination of smaller farms, to the benefit of large ones which eventually control capital, land and labour, thriving on a class of landless wage labourers.

7.2.1 The Malthusian threat

Partible inheritance implies a simple arithmetic of land division. This process is at work since the very beginning of the reclamation of the delta, as described by Hanks (1972) in his historical account of Bang Chan village: “During the initial settlement of Khlaung Kred [at the turn of the century], households claimed about 50 rai of land, but a generation later the average holding was reduced to about 30 rai. The older generation could well divide the land into equal parts among all the children, as *custom dictated*, and certainly until after WWI all could have sustained themselves on such holdings. The postwar appetite for larger acreages and money to spend, however, made a mere 10 rai an insignificant holding. *Many sold these small claims to some sibling and took off to the thinly populated periphery where cheap, uncleared land was still available (emphasis added)*”. Evident in this statement is, also, the role of the land frontier in keeping farms around the 30 rai average which will be observed in the 30's. Rather than sticking to limited and non viable inherited land, young farmers sell their share to their siblings and move further afield.

However, the cost of such moves, as explained earlier, was already responsible for excessive fragmentation in older settlements. As soon as 1930, Montri observes that there is a “very large number of persons working 5 rai of land and under (...). This condition has been *produced by the growth of families living on ancestral land*, which have been gradually divided up amongst the new generations. This condition of congestion which exists in many of the best rice producing districts is quite a problem and should be taken up as one of the matters for enquiry and solution (Montri, 1930). The problem seems so acute to his eyes that he even recommends “the transfer of many families from these congested areas to other parts of the kingdom”.

After the war, the phenomena is also emphasised by Kaufman (1960) who notes that “through the system of partitioned inheritance in which all children receive an equal part of the land, the acreage per capita is dwindling into plots so small in size that

certain members of the household have little alternative but to sell". While he also mentions a move towards primogeniture, the Malthusian process is still at work¹³⁶ and ceases to be compensated for by migration, as the land frontier closes. Some respite will be provided by the upland expansion in the 50's and 60's but land saturation culminates in the crisis of the early 70's.

Around that time, Toru (1968) also ponders on land fragmentation¹³⁷ and reckons that "in this kind of equal division of inheritance, a tendency toward the fragmentation of land is inevitable and unavoidable". Interestingly, he also realises that "the core of the current land problem seems to lie in the fact that counteracting phenomena are failing to occur". A few years later, however, several timely factors would contribute to deflect the worst perspectives of a Malthusian crisis. An extremely rapid demographic transition initiated in the early 70's (with, in particular, a slump of fertility from 5.6 to 2.0; see more details in § 2.2), together with out-migration towards Bangkok and the land frontier, have first controlled the absolute population and were sufficient to offset the growth of the agricultural population and labour force. While Bangkok was growing at around 4% per year (a role now taken by Bangkok's Vicinity), the *rural delta*¹³⁸ growth rate, after the depressed 1960-1970 period, increased up to 1.82% in the following decade but yielded down again to 1.46% in the 1980-90 period (Table 21).

TABLE 21: RATES OF POPULATION GROWTH (1960-1990)

Zone	1960-1970	1970-1980	1980-1990
Bangkok	3.7%	4.3%	2.3%
Bangkok Vicinity	2.76%	3.25%	3.9%
<i>Rural delta</i> (without Bangkok and Vicinity)	1.13%	1.82%	1.46%

Source: Molle (forthcoming)

This still significant overall population net growth appears to have been – in numerical terms – entirely transferred to non agricultural sectors. This phenomena will be analysed in more details elsewhere (Molle, forthcoming) and is illustrated in

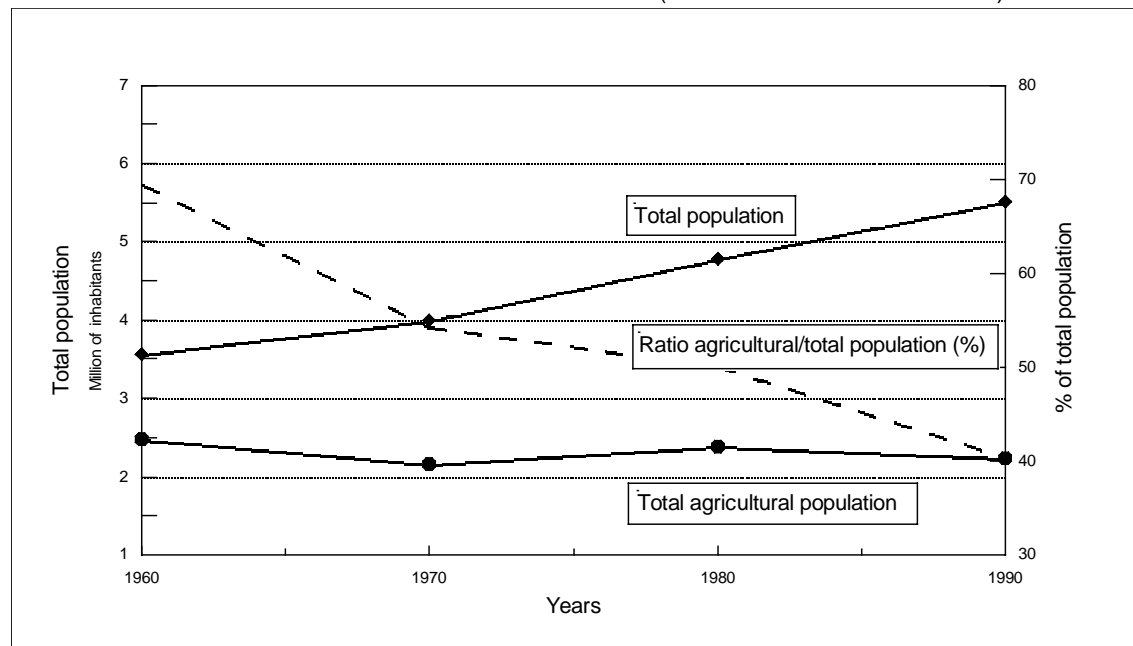
¹³⁶ For all this evidence, the role of partible inheritance as the engine of land fragmentation is downplayed by some analysts. Chiengkul (1983a), for example, states that "contrary to the general assumption that land holding is fragmented due to demographic pressure and land inheritance practice, land was actually more concentrated by the middle and large scale operators". The data supposed to support this claim, the censuses of 1963 and 1978 show in fact a stable situation for the Central Region (farms with less than 20 rai lost only 3% of their area).

¹³⁷ He also rightly sees that "when the situation reaches that point [of land shortage], not only will land transactions become more common, but at the same time the practice of tenancing will be intensified, giving rise to a class of agricultural wage labourers".

¹³⁸ These figures relate to the set of amphoe best matching the delta and are therefore slightly different from the (less relevant) provincial data considered earlier for the sake of comparison with the migration data given at the provincial level.

Fig. 29: the agricultural population in the *rural delta* (Bangkok and vicinity excluded) appears on a slight decline and its share in the total population has collapsed from 70% to 40%. It is noteworthy that, however, this does not translate into a reduction of the number of agricultural families which, because of a decreasing average family size, are on the rise. Furthermore, data from the Labour Force Surveys show that the percentage of persons employed in the agricultural sector has slumped from 48% in 1990 to 33% in 1996¹³⁹ ! We are therefore led to consider that the agricultural population may now be around 30% of the total population¹⁴⁰.

FIG. 29: EVOLUTION OF THE POPULATION IN THE RURAL DELTA (BANGKOK + VICINITY EXCLUDED)



Source: Molle (forthcoming)

The effect of the demographic transition since roughly 1970 first had an impact on the number of mouths-to-feed (thus on *per capita* income) then, 15 years later, on the labour force and, 30 years later, upon the number of heirs at the time of inheritance. This now combines with a decreasing rate of children willing to engage in agricultural activities, contributing to the relative stabilisation of the situation. Under such conditions, it has been shown earlier that fragmentation may soon reverse towards concentration. Current evidence of a significant category of ageing farmers with no heir to take over allows the hypothesis that concentration may already be occurring in some parts of the delta. In areas of older settlements and limited potential for

¹³⁹ While in the same time the ratio for the whole of Thailand was reaching the symbolic value of 50% (NSO, 1997c).

¹⁴⁰ The reduction in terms of households is most probably much less impressive as the diminution in the labour force is mostly due to the youngest population strata moving out of the sector.

agricultural diversification, this may even be something not new. Large farms consolidation has now materialised (during the 1978-93 period) in some parts of Ayutthaya and Sing Buri flood-prone areas (see next section).

The fertility revolution, together with the development of non-agricultural activities and the attractiveness of the urban way of life have succeeded in dramatically curtailing the impact of population pressure and property division at the *very moment it was endangering* the whole system. The re-allocation of the shares of land held by migrated children and the alteration of customary inheritance practices have also smoothed this impact.

7.2.2 The Marxian threat

Hayami and Kikushi (1981) distinguish a process of *polarisation* (the kulak-proletariat Marxian dichotomy) from a process of *peasant stratification*, defined as an “increasing class differentiation in a continuous spectrum ranging from landless labourers to non-cultivating landlords”. The Malthusian fragmentation under population pressure appears as both one of the driving forces of the stratification process, by broadening the range of land endowment at inheritance, and the origin of the (numerically) excess population, eventually evicted, either by force or by will. Several factors have, nevertheless, contributed to both hampering an excessive land concentration and limiting the process of eviction of small farmers in the delta.

The first historical factor is the absence of colonisation: nowadays, only 588 farms have more than 140 rai (only 26 ha) in our 5 inner provinces and no capitalistic “plantation farms” are observed, such as is the case in some ex-colonial countries with comparable human densities. Another factor was the set of constraints imposed by the Siamese kings in order to limit the concentration of territorial wealth of their officials and nobility. They range from a formal overall land ownership to the crown, rules of land return to the crown in case of non use during three years, to the later abolition of *corvée*, which undermined the nobility’s control upon the labour needed to cultivate their land. On the farmers’ side, laws limited the amount of land owned by farmer to 25 rai but concentration was chiefly limited by the magnitude of family labour and the absence of mechanisation.

During the rice boom of the late 19th century, urban-based owners bought land to extract rents from rice cultivation and a class of “hacenderos” could have emerged. However, these owners had most of the time little familiarity with rural life, no desire to engage in it, and were constrained by the necessity to control a large labour force at the time, in that slaves and retainers were being emancipated. Landlords experimented with several options to develop their land: they first resorted to some of their slaves, then appointed overseers to control and direct the work of wage labourers (partly provided by Lao people, who found in it a profitable activity), but

eventually found out that the easiest way was to rent out the land to would-be tenants (Johnston, 1972). The rather high prices of wage labour (Mehl, 1981) and the labour shortage at that time were indicative of the increasingly difficulties faced by landlords in mobilising labour force, as large virgin areas were offered to farmers for clearing. It follows that no rural aristocracy emerged at that time.

Another important remark must be made concerning the link between land concentration and traditional inheritance patterns: focusing traditionally on the fragmentation of small land, attention is diverted to what appears to be an equally significant process, especially in the last three decades: one is often oblivious of the fact that large holdings are *also* subject to the law of division by inheritance. While the negative impact of Thai inheritance customs on land division is often stressed, the positive impact on deterring land concentration is never mentioned. Large land owners also divide their land between their children ! This, to some extent, also holds for urban landlords¹⁴¹: these absentee owners are not local “hacenderos” trying to enlarge their property at whatever cost. They are far away from the land they bought or inherited and there is a trend towards the division and dislocation of their assets over time too.

At present, whereas the combined effects of demographic change and of the out-migration of the labour force to other economic sectors have already reduced (and sometimes reversed) the threat of land fragmentation, the second aspect of partible inheritance appears more clearly: it is the farms over 30 rai which appear to have been divided in the last 25 years (see § 4.1). A rare example of study of family trajectories has been carried out by Stifel (1976) in Nakhon Pathom, who notes that “the top 20% landholders have experienced mixed fortunes over these four decades. The largest families have not inexorably swallowed the smaller landowners”.

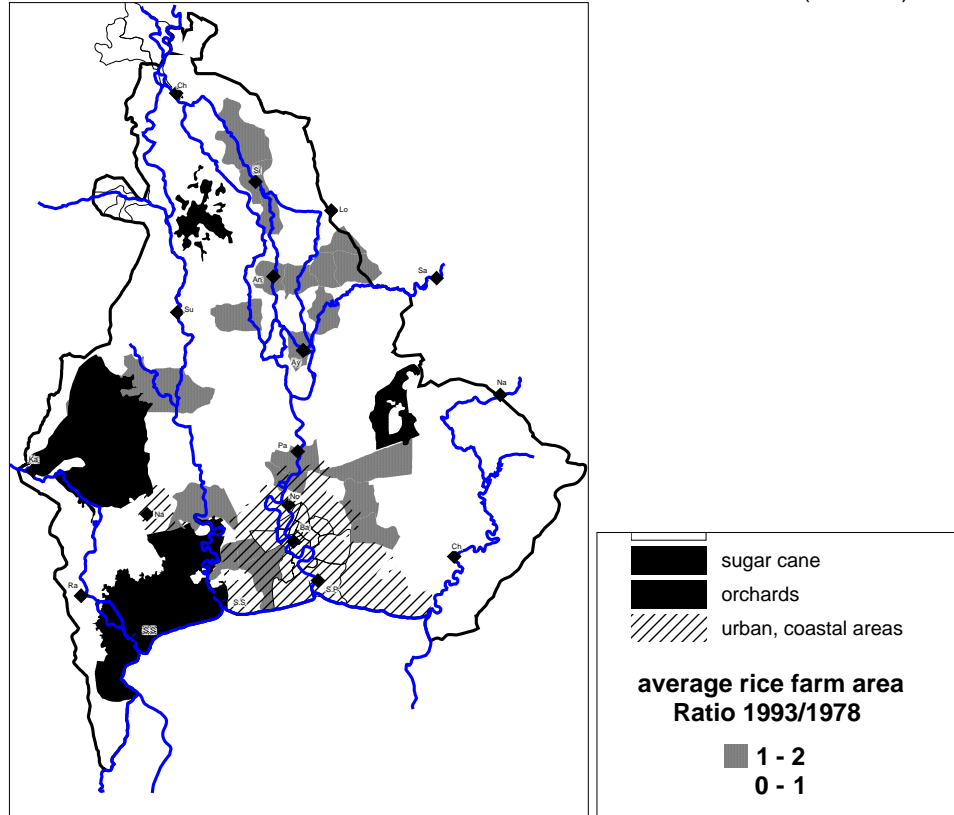
A reservation must be made here: the data on farm size presented earlier refer to farm operators, not to land owners. Phiphatseritam’s survey in 1969 in the Provinces of Pathum Thani, Nakhon Nayok, Ayutthaya and Chachoengsao (1978, cited by Suehiro, 1982) found a total of 127 landlords with land over 1,000 rai and owning together 378,000 rai, 11% of the total area. The crown had a holding of 10,041 rai in Ayutthaya. M.R. Suwanaphang Sanitwong owned more than 35,000 rai in Pathum Thani Province and more than 60,000 rai in the whole central Plain. This suffices to remind us that most of these very large properties remain as a *legacy of history*, rather than as a result of a continuous process of accumulation by a small class of rural landlords.

One peculiar process, however, has been found at work in the delta and must be exposed here: mentioned in the 70’s by Amyot (1977) in relation to some villages

¹⁴¹ but, of course, does not apply to urban-based companies which speculate on land.

near Ayutthaya, the possibility to farm increasingly large pieces of land is now being observed in the deep-water area, north of Ayutthaya, north of Sing Buri and in some other parts (Fig. 30)¹⁴². This process is the outcome of the combination of several factors: 1) the lower profitability of rice growing in this sub-region, which pushes some farmers to farm larger areas; 2) correspondingly, lower rents and land prices; 3) the higher availability of land for rent (many *inactive farmers*); 4) a higher supply of non-agricultural jobs in the area (see § 7.4.2) and higher emigration rates; 5) the limited labour requirements of this type of rice cultivation: the main operation is land preparation, which can be performed on large areas with a four-wheel tractor. This is *now accentuated by the mechanisation of harvest*, which removed the last bottleneck in farm operation. In more intensive areas, the picture is quite different: unimaginable at the time of transplanting, larger farms are also appearing but, as land preparation, water management and crop care require much more attention, the case is rather exceptional and the trend not yet significant.

FIG. 30: AREAS WITH INCREASE OF THE AVERAGE SIZE OF RICE-FARMS (1978-93)



¹⁴² Amphoes in grey and close to Bangkok are probably not significant as they mirror the disappearance of small farms in front of Bangkok's growth. Remains the quite unexpected area south of Suphan Buri.

Cases of operators farming more than 50 rai with a small four-wheel tractor are not uncommon, but the availability of land is likely to be a drastic constraint for such farmers, at least in the near future.

This trend, although still limited, is however historically extremely meaningful. To what extent the combined effect of demographic change and labour seepage to other economic sectors will gradually entail the consolidation of larger mechanised farms remains a surmise. While there is no reason to transpose the experience of developed countries in an Asian context, there is also no reason to rule out the possibility that the rural Chao Phraya delta will, at least partly, undergo, a process of consolidation of larger farms. Its characteristics of rather low population density (for Asian standards), high level of mechanisation and numerous and increasing non-agricultural job opportunities with relatively higher wages contribute to lend credence to the hypothesis. The Central Plain of Thailand could foreshadow a deeper historical demise of agriculture, somewhat similar to what is already on the way in Malaysia.

Rather than the mark of a capitalistic attempt to seize land, this incipient concentration of land appears as a result of the dramatic decline of the number of children engaging in agriculture and of the possibility to farm larger areas with mechanisation (and therefore less hired labour). This, so far, remains limited to areas where the average farm area has already levelled off close to the sustainability threshold and where little intensification is possible. Above all, the process is observed in *flood-prone ecosystems where economies of scale are possible*, due to the peculiarities of the rice system. Furthermore, as the effect of the demographic transition initiated *circa* 1970 is at present starting to impact on the average number of heirs, we may expect this trend to gain momentum in the future. With the demise of agriculture, in the long run, one can legitimately envisage a growth of larger mechanised farms, predominantly based on family labour, with limits in size well below European or American standards but significantly higher than Asian averages of 1-2 ha. Such limitations account for the specificities of lowland rice cultivation, in particular the exigencies of water management at the plot level.

The growth of the upper size class strata (> 140 rai) has been evidenced in § 4.1. It combines a *reduction* of the number of farms in that range with a twofold increase of the average farm size. Table 22 provides some additional information on the tenure status of these farms and shows that some of them are fully rented (86% of these 319 farms are located in Pathum Thani and Ayutthaya provinces). 100,000 *rai* are cultivated by 40 farms over 500 rai (80 ha), 25 of them fully owned.

TABLE 22: TENURE DISTRIBUTION OF LARGE FARMS (1993); 5 PROVINCES

Size range (rai)	Number of farms	Total area (rai)	(fully)Owned	(fully)Rented	Owned and rented
100-140	1,303	143,638	517	241	525
140-180	284	43,423	115	45	118
180-250	183	37,253	94	23	63
250-500	81	25,407	52	8	18
Over 500	40	100,897	25	2	11

Source: Agricultural census 1993

A last main factor accounts for the relative absence of land concentration: while Gisselquist (1977) sees the 1950-1975 period as a time in which “middle class farmers have transferred their contractual relations from wealthy villagers to townsmen for money to borrow and for land to rent”, these potential landlords, in the last two decades, have widely moved out of agriculture and shifted their interest to other forms of capital investment. This may also hold for their children, who generally receive a higher education and have no intent to live in the countryside.

On the other side of the spectrum, however, it remains to be seen what the magnitude of the possible process of eviction of small farmers is, a point which will be addressed below.

7.2.3 Note on socio-economic differentiation and class formation

Economic inequalities within a village are an obvious fact of rural life, even since the time of its formation. With the development of the commercialised economy, the surplus oriented logic of agricultural production is widely believed to have accentuated differences. Exchange of labour and other features of reciprocal relations have lost ground and such changes are often interpreted as the result of the irruption of capitalism in subsistence economies. Relying increasingly on cash mediated services, profit oriented production exacerbates competition and social differentiation: differences in skill, family structure, and factors endowment are likely to lead to some degree of polarisation, with a class of landlords controlling capital, land and thriving on cheap available wage labour. Rather against available evidence, some observers feel that “two distinct opposite classes have been developing in the agrarian structure [of the delta]: the big landowner/rich peasants and the poor landless (or near landless) peasant” (Chiengkul, 1983).

This raises the question of whether socio-economic stratification can be interpreted, or translated, in terms of classes, in a Marxian sense. This debate lies much beyond the scope of the present study and will only be shortly commented here.

Anthropologists have in general emphasised how economic differences did not translate into the constitution of classes, understood as segments of the society with conflicting interests, differentiated power and access to production factors, which tend to associate in order to protect/defend interests identified as common and to reproduce themselves. Rather, they have emphasised evidence of a rather high social mobility, up and down the wealth ladder, an absence of contempt or antagonism attached to economic stratification. Piker (1983) considers that “there are no pronounced class differences within the village. (...) Moreover, such deferences as finds expression in social encounters in Banoi is attracted mainly by the aged, not the relatively well-off”. Tomosugi (1969) reports that “the status of resident landlords and tenants is the same and there is no distinction between them in terms of social status: the superior-inferior relationship seen between the absentee landlord and tenant does not exist. If we look at the village society, neither a ruler-ruled system based on land-ownership nor a system of social stratification have been established”.

Visser (1980) elaborates on the absence of significant link between economic and political power and reckons that “there is also no question of class distinction, or rather of classes *per se*. The local elite does not form a unity. They do not work together. They make no agreements on their economic actions as far as each others clients are concerned and, they do not meet on the village political scene. Neither do the poorer farmers form a class. (...) In village politics, there are no clear faction or cliques. The socio-economic differentiation has (still) no political implications, some farmers are becoming big landlords, but there are (still) no effective important alliances established between the economic elite and the officials”.

The counterproductive nature of directly applying Marxian categories inherited from the Western industrial revolution has been stressed by Mehl (1981). He also holds, however, that it might be incorrect to only look at the village level, while exploitative relationships are in fact often found with moneylenders or middlemen beyond the village proper. Judging from the actual situation in the countryside, the evidence is that such dependency ties have tended to wane overtime, rather than giving way to antagonistic class relationships.

While the landless population, making a living mostly from wage labour, has a limited social mobility, the richest farmers have rarely been able to consolidate their position as to form a stable class of landlords emancipating itself from its social body and from its interwoven set of privileges and duties in order to defend or expand class privileges and power. This is in line with the non evidence of any rentier class. As clearly seen by Nartsupha (1999), “class differentiation inside the village appeared in the form of one group becoming impoverished, having no land or losing it and becoming renters or rural labour, rather than the process of one group of farmers becoming rich and turning into rural capitalists”.

In that sense it seems little productive to overstate conflicts and exploitative relationships in the delta. It might even obscure what might after all be an interesting peculiarity of the rural Thai social structure.

7.3 The significance of tenancy, landlessness and the processes at work

7.3.1 The land jigsaw

The main objective of the present analysis is to attempt to infer a coherent agrarian process from the set of statistics and local observations presented earlier. This is not an easy nor a one-way reflection, as several interpretations are possible. In addition, both the different components of the agrarian system and the linkages between them vary over time and in space, which from the outset precludes simplistic visions.

We can consider an initial period (approximately 1870-1905), where tenancy and wage labour on the East Bank were a *consequence* of land development schemes, with land seized by the urban elite strata. We have attempted earlier to sketch out a model of the constraints faced by pioneer farmers, in order to account for limitations in mobility and for the relative attractiveness of the East Bank. With the gradual expansion of the canal system, an increasing number of settlers emancipate themselves from the East Bank area and gain independence. Around 1930, some localised situations of saturation start to surface, compounded by the economic crisis, affecting most particularly areas with older settlements and no conditions to adopt transplanting (Ayutthaya region). On the whole, tenancy remains a secondary problem, behind credit or marketing (middlemen), and is best understood as an alternative to mobility; in addition, rents tend to decrease, since the boom of the turn of the century.

Focusing on the second half of the century, two main quantitative changes have been evidenced. The first one refers to size farm distribution: after a first period (1950-1965) in which the number of farms of all sizes was found to increase, there was a further continuous increase in the number of farms under 25 rai at the expense of those over 25 rai, with a wider magnitude in the 60's and 70's than during the two following decades. This occurred alongside a decline of 5% in the total number of farms, 27% in total farm land and 21% in the average farm size. The second change refers to land tenure: after rather low values in the post-war period, the share of tenanted land rose up to 50% around 1970 and decreased down to 40% until 1993. In terms of farm numbers, we observe that the growth of tenants in the sixties is further interrupted and that the large category of owner/tenant farmers is, contrary to expectation (Ramsson, 1977; Piker, 1975; Mehl, 1985), undergoing a dramatic cut in the last three decades. The unexpected growth of full owners is associated with small

farms. This, in our view, mirrors both diversification (Pathum Thani and Nakhon Pathom in our sample) and localised shortages in the land rental market.

The evolution of the 1950-63 period can be seen in two different ways. We may argue that the differences in farm size strongly reflect the logic of the family cycle, rather than absolute differences in land endowment, and that the new land brought under cultivation is (numerically) allotted to all types of farms. In other words, there is an increase in the number of farms (with a limited decline of 6% of the average farm size¹⁴³) which is distributed over the whole spectrum of farms found at different stages of evolution. The growth of farms under 6 rai, however, is very significant and this period can also be said to experience growing land saturation, the emergence of very small farms and, probably, the growth of landless holdings. However, no real polarisation is observed, as all categories grow in number. The increase of large farms between 90 and 140 rai, from 2,436 to 4,349 units, might well be interpreted as an emergence of a class of large landowners at the time. However, this trend will be discontinued in the next decades.

As for the evolutions after 1963, it can be hypothesised that the change in the distribution by size class is due to the fragmentation of the larger holdings into smaller ones; as the total number of farms is only slightly decreasing, *it is likely* that the increase in the number of farms due to partible inheritance is compensated by the disappearance of other farms, presumably small ones. This mirrors the increasing difficulty to access additional land along the family cycle (either through purchasing or through renting-in), which reduces the amount of land transferable to children but also shortens the odds on their being able to offset a poor initial land endowment by further land acquisition or rental. It is *also possible* that, at least in recent years, both the rates of farm creation and farm eviction have been reduced to small values. Heirs willing to continue farming may well be nearing the average floor value of two¹⁴⁴, while effectively failed and evicted farmers may be correspondingly limited in number¹⁴⁵.

In addition to this arithmetical logic, some farmers, irrespective of whether they are endowed with viable farm land or not, may lose land through indebtedness or direct sale, thus compounding and accelerating the process. If this line of reasoning is maintained, however, by losing their land (even to absentee landlords) these farmers

¹⁴³ This shows that the increase in land could not catch up with the increase in holdings, resulting in a decline of the average farm size.

¹⁴⁴ Or even less if we consider the total average including those who do not continue farming because the land is transformed to non-agricultural uses. In other areas, 2 (or a bit less because of singles) is the approximate threshold under which the number of farm will be declining, because of the recomposition of farms at marriage.

¹⁴⁵ A low rate of farm creation, as prevailing nowadays, and a high rate of small farmers eviction would translate into a decreasing number of farms and a growing average farm size, which are not observed.

allow other land-hungry operators to achieve their family cycle and their eviction only mirrors the somewhat inevitable non-viability¹⁴⁶ of small farms generated by population pressure and inheritance partitioning. This holds as long as the reallocation of land follows by and large the requirements expressed in the family cycle *but* ceases to be unavoidable if there is a swing towards concentration, some farmers – by whatever means – succeeding in accumulating land in quantities far beyond their labour capacity.

The evidence presented earlier showed that no significant such trend can be detected so far. We contend that, contrarily to the common “crisis” view on this issue, this rut has been avoided in most of the delta, with the reservation concerning the recent growth of large farms (but which has received another treatment) and the core area East of Bangkok: there, the problem must be posed differently as *excess tenancy is not the conclusion of the process but the beginning of it*.

The number of farms and farmers which have “disappeared” in the process described above *remains the key – but still concealed – point of the final interpretation*. In fact, there is no way to estimate these rates from the statistics in hand. The only evidence is that there has been a massive transfer of the labour force (and of the main occupation of the holdings) from agriculture to the other economic sectors (locally and in Bangkok), together with a growing class of wage labourers. *The fulcrum point is whether this shift has been predominantly governed by will (say a “pull” process) or by force (a “push”)*; in other words, whether it has been fuelled by young generations *choosing* to stray from the agricultural life of their parents, or by failed landless tenants and miserable wage labourers escaping a life with no future. In the first case, no farms disappear and the move, on the contrary, allows the maintaining of a viable farm size for fewer holdings (for other siblings); in the second case, small farms fail and do “disappear”.

The difficulty lies in that both processes are probably at work in parallel. In addition, the decision not to engage in agriculture may be a mixture of personal taste – clearly influenced by a cultural context which does not see farming as prestigious (see below) - and of the fact that the family land endowment does not allow a sustainable division. Giving up farming after failure may be forced but also be attenuated by the fact that higher, or at least more stable, wages are offered in the cities, or because other non-farm activities are possible. The whole dynamic is further modified by the possibility of “horizontal” expansion (when land was available) and “vertical” expansion (intensification), a process which, timewise, is linked to technical change and, spacewise, is constrained by agro-ecological conditions.

¹⁴⁶ Whether this non-viability is inevitable or not will be touched upon in the conclusion: this statement is just a matter-of-fact acknowledgement of reality.

The *jigsaw* eventually lies in an interrelated set of interactions: 1) the agricultural and non-agricultural sectors income *differential*, which conditions labour flows between the two sectors and, in return, is altered by these flows. 2) the sustainability of farming, governed by, among many factors, the technological level, the price system within the economic environment, and the average farm size which, in its turn, is a result of: 3) the rate of fragmentation at inheritance, which is conditioned by demography (mainly fertility), the percentage of children not engaging in agriculture (i.e linked to [1]), and the extent to which the family land is passed on to its farming members (alteration of the equal division custom; preferential rental or sale of land from non-farmer siblings, etc).

On the whole, the general impression is that the transformation process has mainly been a “pull” process, especially during the last 15 years. Several indications supporting this hypothesis are provided by an analysis of the labour market (see § 7.4.2). In addition, since as early as the 60’s, the status of full-tenancy and landlessness (see § 1) cannot be strongly linked with a previous status of small holder, weakening the hypothesis of a “push” process. A last point to be mentioned is that emigration out of the rural delta is not a feature of lower economic strata.

In fact, a very important aspect of the transfer of the labour force from the agricultural to the non-agricultural sectors is that it does not only concern small holders or wage labourers. On the contrary, the big farmers invariably invest part of their surplus in the education of their children who, consequently, preferably look for jobs outside the family farm. No doubt that this preference is in part motivated by obvious differences of income between urban job opportunities for educated people and farming. But, we would miss the point should we concentrate only on economic aspects. All the village studies have repeatedly stressed the negative cultural connotation of farming and of rural life, the desire of parents to see their children embracing non-farming activities and the attractiveness of urban ways of life in general and of Bangkok in particular.

Even as soon as the 40’s, Virginia Thompson (1941) notes that “Bangkok is so far in advance – in the western sense – of the rest of the country that provincial Siamese dream of nothing but going there”. A 1972 survey revealed that 65-77% of the peasants interviewed expected that their children should have other occupation than their own (Douglass, 1984). At the same period, Amyot (1975) notes that farmers see “no prestige in farming” and Smuckarn (1972) reports that 60% of farmers in his village, near Lop Buri, already thought of changing occupation, while wanting their children to achieve higher education¹⁴⁷. The pervasive impression that most farmers are neither attached to their land nor to their occupation is well summarised by

¹⁴⁷ 52% because they think that “they will become powerful in government and politics (pen chao pen nay)”, 27% because they will have a higher income, and 21% because parents will receive more support.

Kaufman (1960): "Villagers themselves emphasise that real success in Thai society, to which they aspire and which an occasional individual may achieve, involves not becoming a successful farmer in a rural area but rather getting oneself placed in a high position in an urban occupation, usually the civil service".

7.3.2 Tenancy and landlessness in context

7.3.2.1 Is land endowment a relevant "measure" of wealth or status ?

Let us now reconsider the meaning of tenancy and landlessness within such an overall framework. Tenancy is known to be ambiguous and often gives way to different interpretations. If one focuses on the aspects of subsistence and security, then "the conventional hierarchy of status among the rural poor is usually smallholder, tenant, wage-labourer" (Scott, 1976). Following this line of reasoning, Chiengkul (1983b) considers that "the measurement of social class differentiation in the agrarian sector of the Central Region could be based on the distribution of land holdings data".

Village studies and statistical data, by and large, don't make a very good case for such rather straightforward points of view; this may be linked with the difficulty to define the Delta agrarian system as a subsistence economy¹⁴⁸. As soon as the postwar period, Janlekha (1955) observes that "it does not hold, as it seems to imply, that an owner-operator has a superior economic status than a part owner and that a part-owner is still in a better economic position than a tenant". Mehl (1981) also proposes a more qualified analysis: "full tenancy, predominantly on smaller farms, indicates economic hardship, but part tenancy, largely on medium and large farms, indicates a degree of well being". The first part of the statement, however, is known to have notable exceptions, such as most of the cases of peri-urban vegetable farming and some raised beds orchards in Damnoen Saduak area (Cheyroux, 1998), which combine tenancy and high value crops on small plots of land. More generally, over our 5 inner Changwat, full tenants with less than 10 rai amount to only 5% of the total farms, or 9% if we consider the 0-15 rai range. Moreover, half of these are found in Nakhon Pathom and Pathum Thani provinces and are much likely to correspond to cash crops and peri-urban vegetable/fruit production farms. Thus the category of small full-tenant farmers (also mostly engaged in other activities: see § 7.4.2) who are most likely to suffer hardship, say 5%, appears not negligible but nevertheless secondary.

The second statement is worth being emphasised. Not rarely is the case of Rangsit and other areas in the surrounding of Bangkok mentioned in a negative fashion

¹⁴⁸ Indeed, the few references to the Chao Phraya delta made by Scott (1976) generally picture it as a particular case rather than an example to which his theory should be applied.

because of their high rates of tenancy, an exception in Thai landscape. A closer look at statistics, limited to Pathum Thani province, reveals that the average size of rice-growing farms is 29 rai in 1993 (and was 39 rai in 1978, at a time when tenancy was raising more concern than now). Land rents have also been shown to be in general low on the East Bank. Rice double-cropping over 29 (rented) rai gives a net monthly income of 8,200 baht, which compares favourably with average rural incomes.

As for mixed owner/tenants farms, their share is higher than 20% for size classes over 25 rai. Although in absolute numbers about half of them farm less than 30 rai, their average farm size (40 rai) is drastically higher than that of owners (17 rai) and tenants (23 rai). Smaller farms do not tend to (or cannot) compensate their lack of land by a higher share of rented land, as the distribution of rented and owned land appears to be totally homogenous: in all size classes, the share of rented land varies in a very narrow interval of 40 to 50% (1993 data). Again, it is difficult to separate “well-to-do” farmers in this category based on the sole farm size. However, renting land is indicative of farms which are attempting to expand activities in order to accumulate and the question is rather to know whether their demand for land is fully met or not (more on this in § 7.5.2). “Dynamic and prosperous, these part-owners/part-tenants break the traditional association of tenancy with penury” (Montesano, 1992). The rental market (therefore tenancy) appears to perform an extremely important function of land re-allocation. Based on a comparison of ten villages in Southeast Asia, Fujimoto (1996) observes that, “in contravention of the common view of tenancy as detrimental to agriculture development, the prevalence of tenancy appeared to have provided an opportunity not only for landless villagers to earn a living but also for some farmers to expand the size of their farm activities”.

Eventually, a striking conclusion of the figures presented in § 5.1 is that the hypothesis of the emergence of a growing class of mixed owner/renter farmers, in consequence of shrinking land transfers (Mehl, 1981; Montesano; 1992), is invalidated. Rather, it is the unexpected spectacular growth of small-size fully owned farms which is put in sharp relief.

Judging from Fig. 12 of § 4.1, it seems that around 10,000 farms (of all tenure types) of the 30-60 rai size class have disappeared to fuel the increase of 0-10 rai fully owner-operated farms. A tempting stance would be to conclude that the former have been transformed into the latter by a simple process of fragmentation and that the narrowness of the rental land market and/or economical weakening prevent them from renting in additional land. Additionally, with the evidence of a large share of these farms pertaining to Nakhon Pathom and Pathum Thani provinces, this can also be undoubtedly associated with the agricultural diversification process.

There is a strong case for thinking that it is, nowadays, misleading to judge the precariousness of small farms based only on the sole farm size: intensification (triple

cropping), diversification (high value-added crops), multiple-activity and multi-incomes (including remittances¹⁴⁹) outline a complex family economy which cannot easily be grasped. It might not be relevant to stick to the idea of “all-agricultural” small farms, even if there is some evidence that pluri-activity might be associated with lower average incomes and, therefore, be less desirable.

More generally, the growth of wage labour can be linked to the increase of pluri-activity and to the structural transformation of the Thai economy. Fig. 31 shows that, indeed, small farmers tend to have other sources of income: this is true for half of the holdings with less than 2 rai and for one third of the 2-5 rai category, which draw their income mostly from other (non agricultural) activities. Even among the ones reporting activities on their own holding as the source of main income, 40% also have secondary additional incomes. Non-farm cash income in the Central Region represented 40% of the total income in 1976, but up to 65% in 1991¹⁵⁰ (TDRI, 1995).

FIG. 31: MAIN SOURCE OF INCOME, BY SIZE CLASS (1993, 6 PROVINCES)



Source: Agricultural census (1993)

A last point can be examined to help differentiating the economic status of owners and tenants. Household Economic Surveys provide the average household income for two categories of farmers, those “mainly owning land” and those “mainly renting land”. Although the classification is not as clear cut as one might wish, Table 23 shows that incomes of land owners and of little or not landed farmers little differ. On the other hand, it supports the evidence that agricultural wage labourers’ income is, approximately, only 60% of the farm households.

¹⁴⁹ 34% of migrants in Bangkok with origin in the Central region were regularly sending remittances home, 30% of them less than 1,000 baht/month; 39.3% between 1,000 and 2,000 baht, 16% between two and three thousands and 15% over 3,000 baht/month (NSO, 1997a).

¹⁵⁰ Khumvilai (1984) also comes to the conclusion that “non-agricultural incomes narrow income disparities among households in the community. They are correlated with farm size, farming net income and inversely associated with dependence ratio”.

TABLE 23: AVERAGE HOUSEHOLD INCOME OF FARM OPERATORS; BAHT/ MONTH (CENTRAL REGION, VILLAGES)

Category	1975/76	1981	1988	1990	1992	1994
Mainly owning land	2,354	2,698	4,195	5,909	6,179	7,451
Mainly renting land	3,230	2,471	3,918	4,728	5,405	7,316
Farm worker	1,700	-	1,895	2,611	3,333	3,695

Source: Households Economic Surveys, various issues

7.3.2.2 Landlessness

Landlessness, like full tenancy, has been shown to be ambiguous. The landlessness of wage labourers is part of our jigsaw, as the growth of this category seems to be an indication of an eviction of failed farmers. In line with the evidence shown earlier that the intensity of the correlation is questionable, the magnitude of the flow between the two categories can only be a surmise as little, if any, information on the wage labourer class is available. Eventually, the interpretation of its absolute numerical growth relates to the pull/push dilemma exposed earlier: a “push” process points out to failed farmers encountering no other option than surviving as precarious wage labourers (Chiengkul, 1983a; Douglass, 1984); a “pull” interpretation tends to stress the fact that this class of labourers exists *because* there is a local demand for agricultural labour (Ramsay, 1985), due to intensification and to ageing *inactive farmers*, complemented by non-agricultural job opportunities.

The evidence in hand, commented with some details in § 2.4.1, shows that the growth of a wage labour force over the last three decades may be partly, and most probably chiefly, attributed to family growth, together with a reduced geographical mobility.

An important complement to this interpretation must be mentioned here: the choice to move out from the agricultural sector is strongly correlated with the age of the persons concerned. Indeed, local manufacture factories, seeking productivity, generally employ youths; the attraction to urban life, also mostly concerns young people, predominantly under 35 years old [on the average, more than 80% of teenagers (15-25 years) from the Central Plain villages work in the cities (Poapongsakom, 1996)]. This implies that “older” people (those over 35 years old) have a limited choice and that they are likely to constitute the poorest segment of the rural population. In fact, field observations show that if most ageing wage labourers generally benefit from the support of their children, some, because they have no descendants or because of some other peculiar reason (children are away, dispute, etc), are sometimes in a very precarious situation. They sometimes benefit from the government welfare assistance but this category – the aged landless wage labourers

with little or no family support – is the most obvious segment of the population which is unmistakably poor.

7.4 Linkages between factor markets

Ground for partly solving our interpretative dilemma can be derived from further information on the capital and labour markets, together with their linkages with the land market.

7.4.1 Capital and land markets

The real surge of institutional credit in Thailand dates from the early 70's (Siamwalla et al., 1990). The titling operations which had started in 1955, further to the new Land Act, were carried out quite swiftly in many parts of the delta, in particular in the area of the Greater Chao Phraya Project which was initiated at that time. Exploitation testimonials (SK1) were first issued and later transformed into title deeds (NS3), giving the right to sell and mortgage.

Gisselquist (1977) duly emphasised that "improved registration of land was the biggest single cause of progressive change in the borrowing opportunities for residents of Wang Nam Yen in the past forty years". In fact, with widespread land titles already existing, a large increase of the use of land as a collateral has been observed (Montesano, 1992). This is well illustrated by Fig. 10 which shows the rise of (official) mortgages in the 1928-77 period for the whole of Thailand. Fears that this process might lead to increasing land foreclosure, however, seem to have proved unjustified (Chalamwong and Feder, 1986). Rather, there is evidence that this access to credit has greatly eased farm management and access to land, and reduced land transfers (Gisselquist, 1977; Montesano, 1992).

These two authors have convincingly shown that land and capital markets serve in some sense as substitutes for one another. By mortgaging their land, capital-deprived small farmers who could have otherwise been forced to sell their land to repay debts are given another option through access to capital. Others are allowed to invest (equipment, renting additional land, etc). On the other hand, farmers with capital may resort to the land market to rent (or purchase) more land. "That is, both capital secured by mortgages and land secured by rental represent factors of production reallocated into presumably more efficient combinations than the "original" factor endowment permits" (Montesano, 1992).

This picture is undoubtedly helpful in stressing the gains of a controlled mortgage market but it may also overlook the crude fact that the local operators controlling significant shares of land resources have *a/so* often been the ones engaged in money lending. Their privileged control upon both capital (notably before 1975) and

land resources has translated, in a system with unstabilised production and prices, into a continuous seepage of wealth from peasants to them.

These two markets are also in competition regarding the allocation of capital by local and absentee investors (moneylenders, urban-based individuals or companies). These investors are likely to channel their funds to the most “efficient” market, either purchasing land and collecting rents (and capital appreciation) or lending money and reaping interest rates. In the semi-open situation prevailing between 1950 and 1970, this may have well described the situation. After the process of land registration initiated in 1955, land assets increased in value as collateral and the risk attached to money lending decreased, pulling interest rates down and allowing competition of other moneylenders from nearby main towns (Gisselquist, 1977). It is not known for sure to what extent this triggered an increased purchase of land by these investors: this seems to be the case during the 1960-70 decade (some people are forced to sell their land and/or move to the upland frontier; land values rise because of increased demand and because of the advent of irrigation). With the introduction of institutional credit on a large scale (early 70’s) and the increase of urban-based land purchasers, things changed radically and it is less clear whether and how the relative profitability of both land and capital markets affected these investors. In practical terms, however, both private/public credit and land acquisition soared during the 80’s.

From the farmers’ point of view, there is no doubt that access to capital has radically improved, although this has mostly benefited medium and large farms. Levels of indebtedness given by the 1993 census (see § 2.4.2) are lower than conventional wisdom assume and can be interpreted positively as mark of a healthier situation. Here, too, the absence of clear-cut data on that issue does not allow further conclusion. In the land market, on the other hand, the distortion of prices (dissociation between land values and land agricultural productivity) evidenced earlier implies that the operators who are likely to buy land are not farmers any longer but, in most cases, capitalistic outsiders. This, again, drastically reduces the fluidity of land re-allocation among farmers, not in the short term, as this land will be available on the rental market, but in terms of asset transferable to heirs, and in terms of economic benefit (rentals curtail farmers’ benefits).

7.4.2 Labour and land markets

The *jigsaw* presented earlier stressed the interrelation between the land system and the global economy, through the impact of the re-allocation of the rural labour force. This section first provides some general considerations on land-labour exchanges *within* the agrarian system, then exhibits some contributing arguments to the overall impression that migration flows have mostly been driven by a “pull process”.

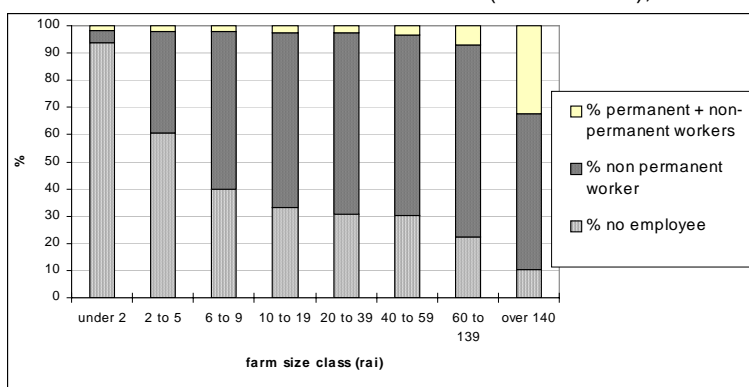
A first obvious relation between the labour and land markets is the two-way exchange between small and large farms. This is well demonstrated by Table 24, which provides data from 1953 and shows that hired labour increases with farm size, with an average of 20% of the farms resorting to it. This is expected in a period with little mechanisation in which the farmed area is strongly governed by family size and the additional labour which can be mobilised. It is in accordance with the family cycle, as young nuclear families increase their income by working on other farms, and with the existence of a (then limited) class of wage labourers. Table 24 also indicates that this does not necessarily associate with economic precariousness, as smaller farms achieve higher income than middle ones.

TABLE 24: USE OF HIRED LABOUR IN 1953 (FARM ECONOMIC SURVEY, CENTRAL REGION)

Farm size class	< 6 rai	6-15 rai	15-30 rai	30-60 rai	> 60 rai	Average
Farms reporting hired labour (%)	6	13	16	24	40	20
Net family farm income	578 (14%)	1076 (34%)	1188 (46%)	1893 (56%)	3143 (64%)	1553 (46%)
Net family total income	4,036	3,120	2,566	3,362	4,925	3,344

Fig. 32 refers to 1993 and also serves to evidence the extremely high rate of use of hired labour in all farms (over 2 rai) and the dramatic increase from the situation forty years earlier. The interpretation may not be, however, as straightforward as above. Mechanisation has now dramatically loosened the relationship between farm area and family labour. This high rate of hired labour mirrors several significant changes: intensification, diversification, and also accounts for the shift from land preparation with one's own buffaloes towards tractor service contracting in the flood-prone area.

FIG. 32: EMPLOYMENT OF HIRED LABOUR (6 PROVINCES), 1993



Nevertheless, it remains that small rice farmers tend to employ less hired labour and, rather, are more likely to perform some operations for more landed ones. Our own

extensive observations in the Delta, however, strongly suggest that there are three categories of farmers who account for a very significant share of the demand in hired labour: the first one is the category of ageing farmers who cannot perform some or all of the farm operations by themselves because of their age; the second is that of well-to-do farmers reluctant to perform some tasks such as pesticide spraying, etc. and the third is composed of holders who have another main activity and grow rice as a supplement (“Sunday farming”).

It is now impossible for a full tenant or a small holder to accumulate enough money to purchase land (except for housing), and it is all the more obvious that finding land for rent is also difficult, although this varies with the location and the price of rice. *While, in the past, land was increased to match labour, things have now evolved towards a situation in which labour is moving to match land.*

Let us now turn to some features of the labour market which support the hypothesis of a predominantly “pull” process of change. The first one is the quasi absence of unemployment (before the crisis) in urban areas¹⁵¹, which gives credence to the idea that migration was a demand-driven process; although the conditions of life in the poorest areas of Bangkok are known to be harsh and although comparisons in such matters are inconvenient, the situation is quite different from other cities from India, Africa or South America, where the phenomena is clearly of the “push” type, urban unemployment and criminality are high, and the rate of return to rural areas very low. In other words and in relative terms, and although this may not do justice to the poorest urban strata, it would probably be darkening the picture a bit too far to state that, to use Engels’ expression, farmers unwilling to get frizzled in the frying-pan chose to take a walk into the fire.

The second element supporting the “pull” side, is that a “push” process would tend to be associated with an excess of labour in the countryside. This is in contradiction with the well established fact that the disappearance of transplanting in the 80’s and the mechanisation of harvesting in the 90’s have been driven by labour shortage (Molle, forthcoming). It can be argued, however, that labour shortages were experienced only at the time of transplanting and harvesting and that in other instances labour would probably be in excess. There is some truth in this statement and the reduction of these job opportunities has contributed to turn wage labour less regular and more precarious.

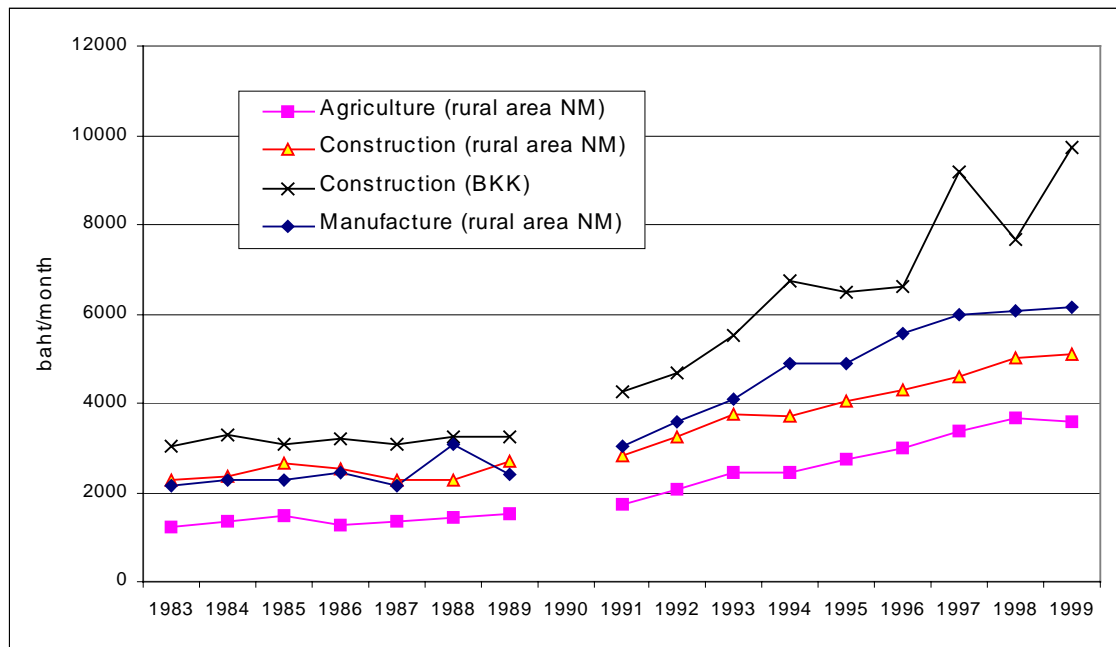
A third argument is provided by examining Fig. 33, which shows the evolution of average monthly wages in agriculture, in the construction sector (in non Municipal

¹⁵¹ Only 0.3% of the labour force was looking for work in August 1996. 0.5% was seasonally inactive and 0.8% available but not looking for work (NSO, 1997c).

areas and in Bangkok) and in manufacturing¹⁵². It is indicative of wage differentials¹⁵³ between the different occupations. In 1996, average wages are at 6,150 baht in Bangkok and vicinity, against only 4,800 baht in regional growth centres (with lower values for female labour). Bonus and overtime are received by 68% of workers in the vicinity and 52% in Bangkok, in addition to others fringe benefits (clothes, transportation) (NSO, 1997b). These extra-wages are often significant and partly offset the higher costs of living in the city.

Industrialisation and a slow agricultural development have widened the productivity gap between agriculture and non-agricultural sectors. As a result, rural resources have been shifted to the non-agricultural sector (Poapongsakom, 1996). Between 1975 and 1988, the ratio of mean per capita income of non-agricultural households to that of agricultural households increased from 2.08 to 2.55 (these figures apply to the national level).

FIG. 33: EVOLUTION OF AVERAGE MONTHLY WAGES IN THE CENTRAL REGION, FOR SEVERAL OCCUPATIONS



NSO: Labour Force Surveys (several issues) (NM: Non Municipal)

This line of argument is further strengthened by considering deflated wages, which evidence a turning point in 1988. Table 25 supports the hypothesis of a stagnating real wage during the 1965-85 period: the change in average daily wages is in line

¹⁵² These data correspond to the first round of each year (January-March). The evolutions are identical for other rounds.

¹⁵³ Wages in Bangkok also include several fringe benefits and over-time bonus not computed here.

with that of inflation. Deflated by the price of rice, however, wages appear clearly on the rise.

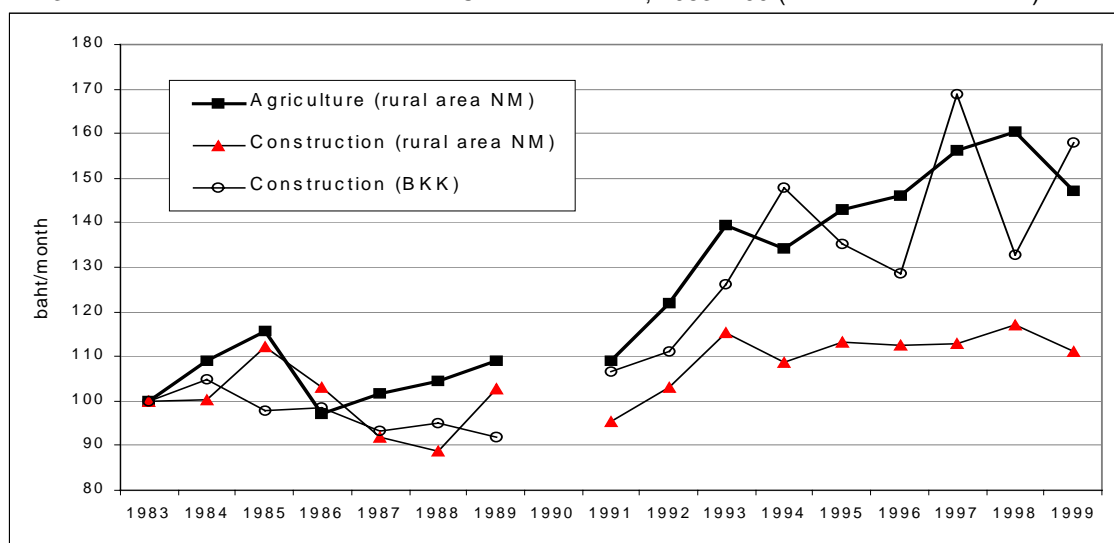
TABLE 25: EVOLUTION OF REAL AGRICULTURAL WAGES (1965-1985)

	Rice price (baht/ton)	Wage (baht/man day)	Inflation index
1965	1000	10	100
1985	2320	35	375
Ratio 85/65	2.3	3.5	3.7

Wage in 1965 taken from Mehl (1981), Piker (1983). Wage in 1985 as in OAE (1986) and ILACO (1985). Rice prices from OAE (Agricultural Yearbook).

Fig. 34 shows that after an unstable 80's decade, agricultural real wages have almost doubled during the last ten years and progressed in line with the construction sector in Bangkok¹⁵⁴. This, together with the sustained differential shown above, is characteristic of a "pull" process. Other data from the Labour Force Surveys show that 1988 is a watershed for the Central region: from this date onwards, the total labour force engaged in agriculture started to decline sharply, losing one million workers out of 3.5 million in the ensuing decade. This is consistent with the hike in real wages and shows that since the late 80's at least labour is getting scarcer in agriculture (Central Region). It is tempting to make a correlation between this turning point and a few other factors.

FIG. 34: EVOLUTION OF REAL WAGES IN THE CENTRAL REGION; 1983=100 (SEVERAL OCCUPATIONS)



NSO: Labour force surveys (several issues)

¹⁵⁴ But without its irregularities: interestingly enough the crisis is sharply felt in Bangkok construction sector but not in the country side until 1999.

First, an obvious correlation can be made with the spectacular record-breaking inflow of foreign investments over the 1986-95 period, when a new Japanese-owned factory was opening every three days (Nation, 16 November 1999). This translated into a boom in new job opportunities, confirmed by the hike of the labour force engaged in the construction and manufacture sectors, as revealed by the Labour Force Surveys.

A second correlation can be made with demographic factors. Because of the high natural growth rate until the late 60's, large strata of population have been entering the labouring age categories each year, lowering the dependency ratio. While the percentage of the population (of the rural delta) between 15 and 55 years old was 49% in 1960 and was depleted by 2% in 1970 because of out migration, its value soared to 54% in 1980 and 58.3% in 1990. It stands to reason that the rate of the population entering the labouring class age is now declining in both relative and absolute terms (15 years ago, natural growth was already reduced down to 1.75% *per annum*), which contributes to the decline of the labour force engaged in agriculture.

This is further compounded by the fact that the decline in the agricultural labour force affects exclusively the younger strata of the population, mostly the 15-24 years old category and, secondarily, the 25-34 one (Siamwalla; 1999).

On the agricultural side, this demise of agriculture corresponds to a seven year period of depressed rice prices initiated in 1989, and also to the mechanisation of rice harvest (admittedly more a consequence than a cause).

7.5 Is the tenure system functioning well ?

Crocombe (1968) provides a few interrogations that may allow one to judge how well a tenure system is functioning: these include "security of tenure and protection of improvements, the absence of unproductive rightholders, the allocation of land to those who will farm it best, protection of the soils, fair and adequate distribution of land, and the discouragement of speculation" (in Cleary and Eaton, 1996).

7.5.1 Allocation of production factors

Of concern in this section is the question of the relationship between the actual tenure system and production factors allocation, principally land resources. This can be considered under two viewpoints: the first one, a preoccupation of neo-classical economists focusing on factor use, refers to the *efficiency* of the contractual arrangements used to reassign production factors and, secondarily, to whether land is allocated "to those who will farm it best". The second, more concerned with the patterns of ownership and control over these factors, deals with *equity* and the skewed distribution of some factors in some classes of operators.

Regarding the effectiveness of markets for the reallocation of factors, earlier sections have shown that they perform quite efficiently, with the reservation that farmers' access to land is now governed by the rental market, while the purchase market is in a deadlock situation. We will briefly address here the issue of the economic efficiency of land factor use in the different tenurial situations.

The conclusions reached by several studies on the relationship between land tenure/size and land productivity are conflicting and varied. The study carried out by DLD (1964) over 5 provinces of the Central Plain showed that full-owner operators obtained higher yields than tenants, though the difference was only 27 to 23 *thang*. This was not confirmed by Amyot (1976), but his findings are limited to three villages in Ayutthaya. Jesdapipat (1980) in his study of the 77-78 rice growing season in the Central Plain, reports that the tenants were the most efficient in the overall production activity, followed by the owner-operators and the part-owners. Koomsup and Sreecomporn (1985) found that in the Mae Klong area smaller farms tend to produce higher yield per rai than larger farms. They find insignificant yield differences between land tenure types and attribute it "from the fact that most rental arrangements are so flexible as to allow tenants and part-tenants to employ the factors of production in a similar fashion as owner-operators". Chuchart and Resanond (1968) found that tenants have lower yields and attribute this to the lack of security in their land use (cited in Koomsup and Sricomporn, 1985).

The lack of concordance on these issues tends to show that the situations are very varied, and rather time and site-specific. We believe that some margin of intensification still remains as labour input in rice production is often low: yields and crop care (as evidenced by the observation of plots with weeds infestation and little care) are still well under their optimum in some farms but this does not clearly relate to farm size. It seems, however, that such cases correspond to *ageing or inactive farmers* and that farmers paying rents tend to be pushed to achieving higher yields. On the other hand, fields with intensive labour and capital input can be seen in all situations of tenure and size (in the west bank and the upper delta, for example). We may therefore endorse the opinion of Fujimoto (1996), according to whom "tenurial status and form of tenancy contracts *per se* were relatively insignificant determinants of rice technology and productivity".

Another point of much debate in the literature is the impact of tenure and ownership security upon investments in farm and, therefore, upon productivity. There is a rare unanimity in the literature¹⁵⁵ about the link between the precariousness of the tenants

¹⁵⁵ See in particular Zimmerman (1931), Andrews (1936), Pendleton (1962), Thompson (1941), FAO (1970) and ESCAPE (1955), who summarises the issue as follows "Since rents are high, security tenure is lacking and there is hardly any possibility of the tenants getting any compensation for improvements effected, there is no incentive

on the East Bank and its poor state of maintenance and low productivity. Well known features of the Rangsit area are the impermanence of the settlements, the wretched nature of housings and the low level of investment in plot or canal improvement.

Despite the fact that many commentators keep on taking for granted that the alleged lack of security of tenancy impinges on productivity, there is a strong case against the relevance of the issue for more recent years, in the Central Plain. Chalamwong and Feder (1986), who comprehensively addressed this question for the whole Thailand, confirm that security of land ownership in the Central Plain was not a deterrent to agricultural development. Land titling¹⁵⁶ was started in 1955 and almost wholly achieved when on-farm investments were necessary at the time of wider technical changes and when large-scale institutional credit was made available, both around 1975. Stifel (1975) found no evidence that "insecurity in the tenure rights of the farmers" had a negative impact.

It is not rare to see tenants improving the plots they rent in order to be able to grow a dry-season crop where only traditional varieties were grown before (Molle et al., 1999, Latham, 1999). Other striking examples include Suphan Buri farmers who come to rent land in the Phak Hai project and invest their own capital to develop the ditch network and improve levelling, or cases of tenants transforming rice fields into shrimp ponds. This further strengthens the evidence that the flexibility of rental arrangements, in a context of a rather stable basis of trust (see § 6), is not seen as precarious by farmers and that it is very unlikely to impact on productivity.

Equity can be seen as a measure of fit between land endowment and labour availability. For each size class of the 1993 census, we have plotted in Fig. 35 the man/land ratios, where "man" represents successively the number of members over 13 years and the estimated¹⁵⁷ family labour availability. Few comments are needed to emphasise the extreme imbalance between small and large farms. The case of holdings under 2 rai, however, must be taken cautiously because of the specificity of the farm activities considered in this category (animal breeding, etc). The ratio for the 2-5 rai and the 40-60 rai classes differ by a factor of 10; this is difficult to interpret only on the basis of differences in farm mechanisation, given the widespread use and availability of most mechanical devices. Rather, this strongly shows a labour surplus in "land-thirsty" small-medium farms, although an (*unknown*) part of it has been

on the part of the tenant to improve the land". Manopimoke (1989) holds that this insecurity was the cause of the preponderance of broadcasting in the area.

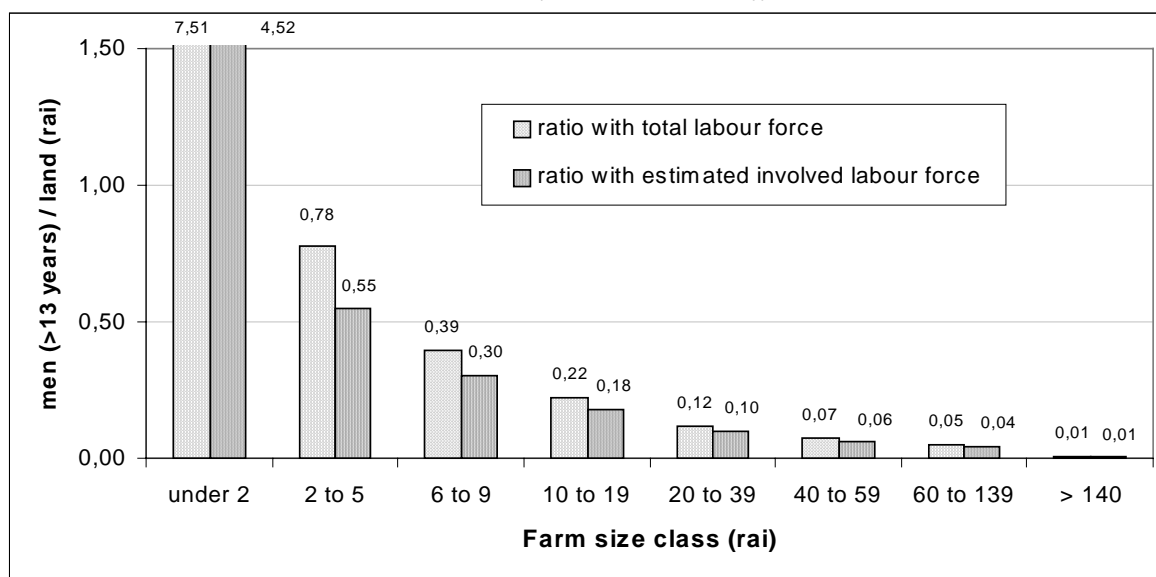
¹⁵⁶ This is the reason why it has not been judged useful to describe in details the different types of land titles. Details on that question can be found in many sources, including Chirapanda (1983), Ramsson (1977), Tantikul (1973), Feeny (1982), Chalamwong and Feder (1986).

¹⁵⁷ The « involved labour force » was estimated based on the weighing of the categories of labour of the 1993 census (for population > 13 years old). Coefficients were taken as 1 for " working only on holding", 0.75 for " working mainly on holding", 0.3 for " working mainly on other holding" and " working mainly other work".

shown to be allocated to other farms or non-agricultural activities. With this reservation, the figure points out to an imbalance between farm land and labour endowments.

The impression is that the labour market quite efficiently compensates for this imbalance in land and labour endowment, reinforcing the complementarity of the land and labour markets shown earlier. It remains that both land and labour re-allocations come alongside increased precariousness, in terms of irregularity, and that if land tends to be scarce and labour plentiful, the remuneration of the two factors will move in favour of landowners.

FIG. 35: LABOUR/LAND RATIO, BY FARM SIZE CLASS (1993; 6 PROVINCES))



7.5.2 Supply/demand on the land market

We have seen earlier that the land and labour distributions are rather skewed and display inverted profiles. We will consider here whether supply and demand match each other and the consequences of this.

7.5.2.1 The rental market

Let us first consider the rental market. The willingness of some farmers to rent out some land is likely to depend on the return they can expect from farming their land by themselves as compared to leasing it. In periods of stagnation and low returns, such as the 1905-1912 or the 1965-72 period, it can be expected that more land is available to rent and this is what was observed during that time. After this latter period, rice farming productivity took off and the tenanted share of land decreased

accordingly, albeit slightly. A similar effect was observed as soon as 1918 (post-war boom) and as late as 1995 (appreciation of rice prices).

This response, however coherent with basic economic conceptions, is now increasingly altered by the fact that a significant portion (probably the majority) of the land rented out belongs to the growing categories of *all-leasing holders* and *absentee landowners*. This stock of land is likely to be rented in *all instances*, ensuring a basic stable stock of land for rent. Another segment of the rental market which needs to be stressed here is due to the fact that land plots inherited from both families may often be distant from one another and from the new family residence. Distant plots are thus rented-out (or sold), while closer plots are rented-in or purchased (see case in Suphan Buri, reported by Fujimoto and Matsuda, 1987). At present, the share of tenanted land seems to have levelled off around 40% of the total farm land. It is not known what impact the last boom will have had (since 1996) on this share: if little changes are recorded, this will be an indication that most of the tenanted land is leased by *all-leasing holders* and *absentee landowners*, who fuel the land rent market.

The economic function of absentee landlords has long been recognised by Stifel (1976) who states that “imperfections in the capital market and limited collateral deter the farmer from purchasing land for peak needs. The landlord serves the economic function of holding land and supplying it on the market for these temporary requirements”. They are nowadays accompanied in that role by *all-leasing holders*. Their role appears more effective in periods of high economic opportunity in which the share of land leased by active farmers is likely to shrink, while demand rises¹⁵⁸. The fact that absentee landlords are seen as useful for the regulation of the market is evidently not an argument in favour of their existence but it stresses that, through the land rental market and despite the percentage of the added value extracted, their land is made available for farming.

At present and probably as a general trend for most of the second half of the century, the demand of the market is higher than the supply, but depressed rice prices may also reverse the situation. The most spectacular example occurred in 1970/71, when rice prices collapsed to levels unknown since the war. Kitahara (1985) observed that while “landless people used to be tenants of paddy fields, they found out that being a daily worker paid more than being a tenant farmer”. Whereas, for the landowner, the decision to rent his land out may partly depend on the relative benefits he may get

¹⁵⁸ A hint can perhaps be obtained from the 1998 intercensal survey: if we compare the percentage of the total area cultivated by the owner in the Central Plain, we find 71.6% against 69.2% 5 years earlier. However, there are some new categories added in this survey and it is not clear whether they were formerly included in the “other” category or not. This could be indicative of a slight contraction of the rental market, possibly due to some owners farming their land to benefit from the higher prices.

from farming by himself (or by hiring labour) or receiving rates, for the tenant the trade off is between renting in and alternative occupations, among which are wage labour or migration. This demonstrates how the equilibrium point of the land rental market is crucially linked with the opportunity cost of family labour for both the landowner and the tenant in the wider and non purely agricultural economy, alongside the remuneration of those activities. Again, this does not apply to a few categories of owners (those too old to work, in particular if they get some income from remittances of their children) and tenants (some have not enough capital to undertake farming).

The rent, its type and value, reflect much of these complex interwoven exchanges and economic equilibrium within the agrarian system. It also embodies social dimensions, as the contracts between relatives (more than half), with local or Bangkok-based landlords have been shown to bear differentiated characteristics linked to social proximity and control.

In recent years, on the contrary, the boom of double and triple cropping in the delta has stirred demand. Many farmers complain that it is difficult to find land to rent. On the other hand, direct seeding and mechanisation now allow active farmers to cultivate larger areas. For these, capital and labour are rarely a limitation and their cultivation potential is higher than the average land available to them. The bottleneck lies in the stock of land resources, resulting in some economic inefficiency.

Data on land rents may provide some indications on the market orientation (see § 6.3). The general conclusion is that they are, in relative terms, lower than 30 or 40 years ago. This also supports the idea that demand is declining in the long run, in line with population pressure, a further argument for the “pull” theory. However, there is some inconsistency in rental fares, which show a rather high spatial and temporal heterogeneity and are very much related to the type of social relationship between the owner and the tenant. The low level of formal written contractualisation since the late seventies, also indicates that the land rental market is flexible and rather balanced: neither the owner nor the tenant is willing to be tied by binding contracts over a long period.

With a percentage of tenanted land at 40% for our 5 inner provinces (or 37% in 1993, for all the *amphoe* of the *rural delta*, Bangkok and vicinity excluded), one is tempted to venture assessing the respective shares of the stock of land owned by 1) *all-leasing absentee holders* (landed heirs engaged in other activities), relatives and neighbours (local farmers); 2) local absentee landlords, 3) Bangkok-based landlords. In the two Ayutthaya villages considered by Fuhs and Vingerhoets (1972) in 1970, two thirds of the landowners renting out land had residence in the same *amphoe*. Only 8% lived in Bangkok-Thonburi. Similar data for 1972, and Ayutthaya and Nakhon Pathom provinces, showed that 21 and 12% of the landowners could be

considered as absentee landlords respectively, and that only 8 and 12% were living in different provinces¹⁵⁹ (Stifel, 1975). Based on the several sources mentioned earlier (see § 6.2), it seems a fair guess to take the share of land owned by relatives and other local farmers at half of the stock (20% of the total land), while each of the second and third categories is attributed 50% of the remaining half. These are mere estimates of *average* values for our 5 provinces altogether (obviously, in areas such as Pathum Thani where the percentage tenanted is higher, figures will differ).

We can get a hint about the spatial distribution of the relative “distance” between landlords and tenants by making use of the NRDC database at village level (1994). One of the variables is given a value of 1 if landlords are predominantly “relatives”, 2 if they live in the “village”, and 3 if they live “outside the village”. It therefore qualitatively combines physical and social proximity and, however rough an index, in particular to account for mixed situations, its mapping (after averaging by *tambon*) gives a rather consistent vision of an overall tenure “proximity”. Fig. 36 shows that higher “distance” is closely related to areas with higher levels of tenancy and that the Mae Klong area exhibits “closer” tenure ties.

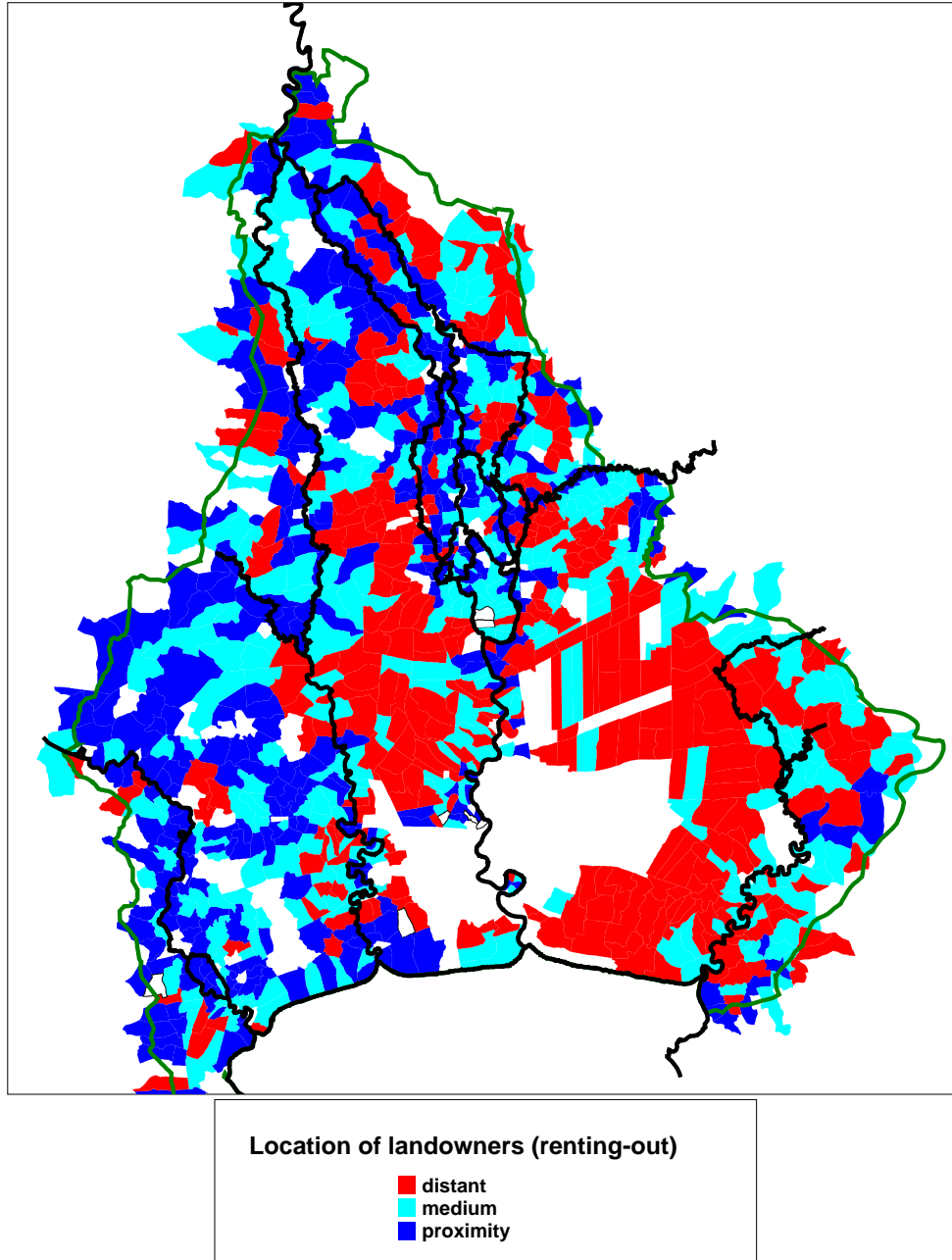
7.5.2.2 The purchase market

Regarding the purchase market, as discussed in section § 2.6, the picture is gloomier: land prices appear dissociated from land productivity and land is unaffordable for most farmers. This means that the reconstitution of farms by accumulation before further division by inheritance is no longer possible. The process of reallocation of land resources turns out to chiefly rely on the rental market.

A hint at the shrinking of the purchase market can be obtained from a few observations, unfortunately fragmentary: The *11 province survey* of 1965 showed that 38% of all the land had been purchased (against 60 passed through inheritance); In 1974, in Ang Thong Province, half of the land had been acquired by first occupancy right, while 21% had been received by inheritance and 29% purchased (Gisselquist; 1976). More recent surveys in Suphan Buri Province have found much lower rates of purchased land: 23%, in 1985 (Fujimoto; 1987), and 21%, in 1991 (Phélinas; 1993).

¹⁵⁹ Data are also given since 1910 and are always inferior to the 1970 dates.

FIG. 36: QUALITATIVE « DISTANCE INDEX » BETWEEN LANDLORDS AND TENANTS



Despite the crisis which halted land speculation and led to a drastic drop of prices, the value of land is likely to remain extremely high, in any case high enough to keep preventing most farmers from purchasing land for productive purposes. The question is then raised of what will happen with the land still owned by non-agricultural relatives (the first category): in the past, they would have, one way or another, transferred their land to other farmers of the community. With current prices, buyers

are likely to be outsiders, if this land is to be sold. As the price distortion and the class of *all-leasing absentee holders* (at least with this magnitude) are both recent, it is too early to observe whether the trend will be towards selling land or towards passing on the land, as an asset, to children.

Crocombe's criteria of a "discouragement of speculation" is not met by any administrative measures¹⁶⁰ at the moment, and there is no indication that speculative transactions are going to cease. This is partly due to the continuous expansion of Bangkok and the lasting profitability of investments in land along history.

¹⁶⁰ There is no adequate specific taxation, for example, to limit the land left fallow and belonging to absentee investors.

8 Conclusions

In the early years of emancipation, the Thai peasants, should they not inherit land or become dispossessed, were left with three alternatives as a basis for subsistence (Piker, 1975): 1/ to move to the land frontier; 2/ to voluntarily enter into bondage; or 3/ to change activity. *To some extent, it can be said that these options have remained identical throughout the history of this century.* The land frontier in the delta was probably closed around 1930, with only a few water-deficient lands remaining. These would be later irrigated within the Chao Phraya and Mae Klong Projects. A second land frontier was provided in the late 50's and 60's by the adjacent uplands but it became exhausted in the early 70's¹⁶¹. Agricultural expansion has been instrumental in relieving agrarian pressure in the more densely populated countries of Southeast Asia, but in Thailand the expansion witnessed during this period "is exceptional in having had a sustained expansion growth offsetting population growth" (Koninck, 1997). In the last 20 years, however, we have witnessed a phenomena of *regression* of the internal land frontier, with a yearly average loss of arable land at 1%.

The bondage option is still alive, albeit in an attenuated and vanishing form, with a rural proletariat maintaining patron-client relationships with rich farmers. Some of the social and cultural features of ancient bondage can be sensed in modern wage labour relationships.

Changing activity, lastly, has gradually become the principal option: many have moved to Bangkok or, notably in recent years, have found activities in local industries, commerce and services which have soared in regional centres¹⁶² and smaller towns. Even wage labourers and farmers are engaged in and draw income from a wide portfolio of activities: this prompted Koppel and Zurick (1988) to rightly observe that this "rural employment shift" suggests "that an increasing proportion of rural labour relations are *not* connected directly with traditional agrarian processes, but rather with more complex socio-economic relationships in which agrarian processes may be only one part".

Individual trajectories in the last three or four decades, have been shown to come under one of the following main lines:

¹⁶¹ The land/man ratio for the central region (without the south-western part) peaks around 1970, while for the whole of Thailand this occurs around 1978 (Siamwalla, 1991).

¹⁶² See Figure in Annexe 16, which shows the aggregated economic growth of the provinces of the delta (BMA excluded). **The deflated** Gross Product increased from 320 to 500 billion baht in only 6 years !

A huge segment of the agricultural population, mostly belonging to young strata, has “chosen” not to continue farming and has shifted to other economic sectors, either in Bangkok or in regional centres. Contrary to common wisdom, a large part of this shift has been local, within the rural delta, as shown by the respective evolutions of the agricultural and non-agricultural populations. Indeed this choice may have been driven by personal preferences, a higher educational level, expectations of higher income or by attraction to urban life, but it may also have been a “non-choice” for many, as the continuation of farming might have entailed uneconomic and unsustainable family farm division.

Other people chose to continue farming and a certain percentage of them, for whatever reason, have failed and eventually lost their land. They are believed to have either forcibly shifted to non-agricultural occupations or to have remained as full tenants or wage labourers (partly) in the agricultural sector. The percentage of full-tenants has been found to decrease significantly, while the population of wage labourers, on the contrary, is on the rise.

There is a dramatic lack of information about the complex mix of activities and sources of income of these wage labourers and there is no conclusive data to substantiate any hypothesis on the *magnitude* of the flow from small holders to wage labourers. It is widely assumed that there is a direct causal relationship – a continuous seepage from one class to the other – but data in hand have shown that reality might be more diversified and more complex. Most landless never possessed land before and some evidence suggests that the number of these wage labourers is strongly correlated with the local demand for work. This demand, in its turn, is the result of intensification (double or triple rice cropping), of diversification (labour intensive cash crops or aquaculture), of the ageing of a class of farmers who cannot operate their plots by themselves, in association with a series of farm industry and off-farm job opportunities. The growth of the wage labourers in the last 30 years can be mostly attributed to endogenous reproduction: their geographic mobility of these landless people has been shown to be constrained by several factors, including a lower educational level and the greater precariousness faced by elderly people (need to have children taking care of them).

Other farmers have succeeded in carrying on farming with, by and large, economic sustainability, although on a declining average farm land. This has been made possible through the same evolutions mentioned above (intensification, diversification, pluri-activity). This has probably come alongside a growing socio-economic differentiation but there is no evidence of a growing strata of large capitalistic farms (all categories over 25 rai are depleted), with the notable exception of some farms growing several hundred rai in the flood-prone area. There remains to be seen whether this trend will also appear in intensive areas. Farm differentiation in the last 25 years is believed to owe much to access to water and cropping intensity.

“The past 25 years has been one of a trend toward the gradual concentration of land into larger and larger owned units and the development of tenancy.(...) this will lead to a greater concentration of land.” Common in the late 60’s and the 70’s, this statement (proffered here by Zimmerman, 1931) has been issued in one form or another all along the XXth century. The data compiled in this study show that this process, particularly visible in crisis times, did not eventually materialise as a hallmark of the delta agrarian system. This trend can be found during the 1950-63 period but the larger farms were subsequently fragmented and tenancy levelled off, while the full-owners of reduced farms outnumbered all other categories¹⁶³. The concentration of ownership observed in the East Bank cannot be interpreted as the result of a gradual process of capitalistic land grabbing and accumulation. Rather than its outcome, this peculiarity was at the *origin* of the history of the agrarian system and remained as a stigma all along the century.

Most of the analysis presented in this report has remained little judgmental of the processes which have been highlighted. The notion of “non-sustainability”, which governs some of the trajectories, is in line with the historical context and conditions *observed*: it is, however, also highly *relative*, and conditioned by a series of parameters and policy orientations.

Non-sustainability, it could be argued, is a result of social and economic evolutions, some of them endogenous, other governed by state policies or pertaining to the world economy. This opens the way to a wide range of questions on agricultural policies (e.g. taxation, credit, diversification, extension, price stabilisation, contract farming and organisation of marketing channels, water allocation and so on) and on the treatment given to agriculture with regards to other economic sectors (respective levels of public investments, “urban bias”, etc). These questions, obviously, would take us too far from the limited scope of this study but they surface as soon as we want to elaborate on the desirability or the inevitability of the processes evidenced.

Many critical views on the current transformations of the rural society focus on farmers’ out-migration to cities, wage labour or on the integration of agriculture to market economy, which are often viewed as a downfall of egalitarian non-monetised rural communities into the capitalist world. These are not groundless, as they highlight the transformation of rural communities within an economic system run by logics and interests located far beyond their reach and in which they are often doomed to subsist either as an urban or a rural proletariat. At the root of this line of arguments lies the feeling that farmers have been drifting along a path from relative

¹⁶³ That “the high average farm size in the central Plain – the highest in the nation – is indicative of the intensive and successful competition for land by commercial interests” (Douglass, 1984) is hard to sustain in front of the evidence of the constant decline of the average farm size (from 30 rai in the 1930’s to close to 20 rai in 2000) and the absence of long-standing land accumulation in large farms.

self-sufficiency, autonomy and control over their resources towards a more individualistic and capitalistic world which eventually defines what they do, buy and sell and at which price.

What stands relatively out of doubt, however, is that most agrarian systems, and that of the Chao Phraya Delta in particular, cannot survive in a situation in which horizontal (new land brought under cultivation) and vertical expansion (intensification), within a given economic environment, do not catch up with the reduction of farm land per capita brought about by population pressure.

It can be argued that intensification in a proper economic environment is not incompatible with high population densities (see the case of Nguyen Xa village, in the Red River delta, as commented by Bray, 1999) but it eventually only *delays* the crisis and the necessity of the development of non-agricultural sectors to avoid the suffocation of the agrarian system. *Rather, attention must be directed to the modalities of these transformations:* growing urban proletariat cut from their rural basis and suffering from unemployment, market-oriented productions within an economic environment in which the added value is mostly absorbed by non-farmers, price fluctuations which undermine farms sustainability, are observed in many parts of the world.

Irrespective of whether this is considered desirable or not, farmers are no more independent actors at the margin of an industrialising world : they are part of it in that flows of money, products, information and people increasingly tend to interlink sectors of activity and segments of the society. Even responding to growing human density by agricultural intensification cannot anymore be thought of independently of an urban or export market for cash crops or other products. As emphasised by Rigg (1996), "the distinctions between rural and urban are becoming blurred as households increasingly occupy, or have representation in both the rural and urban worlds and, more to the point, earn a living in both agricultural and non-farming activities. (...) This requires a re-thinking of the rural economy and rural life, a re-appraisal of policy initiatives and planning strategies, and a reformulation of theories of agricultural and rural development".

In the case of the Chao Phraya delta, there is little doubt left that without the timely relief provided by the upland frontier, non-agricultural activities in rural and urban areas, agricultural intensification/diversification, the demographic revolution and the adjustment of the cultural patterns of inheritance, the agrarian system in the delta would have undergone a major crisis.

Through these processes, not deprived of hardships and periodical deadlocks, the delta has succeeded in avoiding the situation too often observed in Asia and described as follows by Hayami and Kikuchi (1981): "The increase in non-agricultural

employment [is] grossly inefficient to absorb the increments to the labour force, resulting in rapid increases in rural labour population pressing hard on limited agricultural land (...) the wage rate is bound to decline, the return to land to rise and the income position of labourers and tenants to deteriorate relative to that of landowners". Rather, the agricultural labour force – in the delta - has been roughly controlled, real wages have been conserved and significantly raised along the last decade, the demographic revolution has smoothed the transition. Resanond's "big problem" has been avoided, partly because of timely evolutions (e.g. fertility regulation) and policies (irrigation infrastructure), partly because of the internal resilience of the system; "the deterministic belief in the inevitability of agrarian crisis" (Montesano, 1992) has been by and large invalidated.

That such an evolution was not obvious beforehand can be well captured by recalling Van Roy's paper (1967) on the "Malthusian squeeze" and its pessimistic acknowledgement that "neither techniques of agricultural production, trends of population growth, habits of consumption, nor the underlying pattern of industrial activities can be expected to change overnight. The reorientations in socioeconomic organisation required for such changes to take effect are innately gradual, not cataclysmic". However gradual, these reorientations proved to be far-reaching and rapid enough to avert the crisis¹⁶⁴.

We attempted to show that the crisis which surfaced around 1970 had been weathered through a series of concomitant processes. Rural population pressure on land has been relieved by the growth of non-agricultural activities. Rice cultivation dragged itself out of stagnation thanks to better prices (1973-1980), decreased taxation and technical change (introduction of High Yield Varieties, double cropping, improved water control). Real land rents gradually declined and local absentee landowners tended to turn their interest to and invest their capital in other developing sectors of the economy. Increased access to credit and the use of land title as collateral also proved beneficial, although they remained of little benefit for landless farmers.

These changes eventually led to a transition which can more adequately be considered as a "pull" process, especially with regard to the last 15 years. This is not to downplay the inequalities which subsist in the delta nor to ignore the growing socio-economic differentiation at work in the last decades. On the other hand, sticking to an overly pessimistic vision, which can indeed be fuelled by considering some specific segments of the delta or of its history, might also prevent one to

¹⁶⁴ Another pessimistic vision can be found in Sinha (1984): "Optimism about rapid industrialisation absorbing the surplus rural population in most developing countries is on the wane. One of the main reasons, as already stated, is the very nature of modern large-scale industrialisation which, being mainly capital intensive, fails to absorb a significant part of the labour force".

integrate some positive aspects and get a more objective conception of agrarian change in the delta.

Focusing on the aspects of the transformation of the land system revealed by the study, a few points deserve to be highlighted:

1. After an increase between 1950 and 1963 (+36%), the number of agricultural holdings has been found to level off. A decline is observed in Provinces with a higher loss of agricultural land (Pathum Thani, Nakhon Pathom) and in Ayutthaya. Slight increases are observed in Ang Thong and Sing Buri, while Suphan Buri's farm expand in the upland.
2. The relative stability in the number of farms associated with a significant overall loss of agricultural land means that the average farm size is declining. Along the second half of the century, its value have decreased from 30.1 rai in 1950 down to 22.1 in 1993 (for our 6 provinces).
3. Rice mono-cropping, with average areas higher than the total average by 3 rai, is now found in only 52% of the farms (1993). While 96% of the farms grew some rice in 1937, this percentage declined to 90% in 1963 and reached a 70% low in 1993.
4. During the last 40 years, a great number of farms over 30 rai have disappeared, most probably fragmented into smaller farms, which have been increasing in absolute and relative number.
5. The Gini indice, computed for the four census years [1950, 1963, 1978 and 1993], yields values of 0.41, 0.46, 0.47 and 0.52 respectively. The increase between 1950 and 1963 is due to a significant growth of medium/large farms, paralleled by a hike in small farms. This suggests a worsening of the distributional pattern of land, but the emerging larger farms will be divided in the following 2 decades. The later shift, between 1978 and 1993, can be ascribed to the increase of small (owner-cultivated) farms but it must be interpreted cautiously, as many of the small farms grow intensive cash crops or practise aquaculture.
6. Contrarily to logical expectations formulated in the 70's, the classes of full tenants and mixed holders have not grown ever since. On the contrary, and rather unexpectedly, it is the class of full owners which now dominates, most of these emerging new holdings being associated with small farms areas.
7. Correlated to this phenomena is the decreasing fragmentation of holdings: while farms had an average of 2.6 plots in 1953, this number was 1.83 in 1978 and 1.64 in 1993.

8. Tenancy, expressed both in the number of farms renting all or part of their land or in percentage of farmed land, has been rising to a peak in the early 70's and has, overall, been slightly declining hitherto. However, most provinces show a slight increase of the percentage of tenanted land in the 1978-93 period. It remains high for Thai standards (40% of the land in our 5 provinces, or 37% of the rural delta and 41% of the vicinity, in 1993). Data are not fully conclusive because of some missing category for the 1950 census. In any case, there is strong evidence that tenancy was already high in the 50's and 60's and before the second World War. Despite some slight ups and downs (War, 1970 crisis, etc), the most striking picture arrived at is that of a certain stability of the tenanted farm land, since as early as the 30's !
9. The farm size has become an inadequate and misleading parameter to judge the economic situation of holdings: diversification (labour and capital intensive cash crops, or aquaculture, on small plots), intensification (HYVs, double and triple cropping), multiple activities and the decrease in family size drastically distort the relationship between land endowment and *per capita* income.
10. Some concentration of land is surfacing, mostly in the flood-prone area where the demise of agriculture has long started. This far-reaching, albeit still limited, process is likely to be sustained due to the mechanisation of harvesting. It may prefigure an in-depth transformation towards large mechanised farms, a "European-like" scenario, not common in monsoonal Southeast Asia. It remains to be seen whether this trend will also affect areas cropped with High Yield Varieties or not.
11. Data on indebtedness, though numerous, have been found inconclusive and do not allow a clear longitudinal analysis. Debts vary in kind, amount and purpose and cannot be systematically correlated to farm assets and farm categories. With the growing supply of institutional credit in the late seventies, the working capital needed to buy agricultural input is mostly provided by Banks, co-operatives or farmers themselves. Land foreclosure has not increased with the use of land titles as collateral and remains rare. However, it cannot be estimated to what extent some land sales are motivated by debts and push farmers to move out of the agricultural sector.
12. Tenancy appears as an ambiguous phenomena. On one hand, there is the evidence that land ownership is a much preferable status (both to avoid transferring rents to non-farmers and to keep the farm main production factor, as a security and a transferable asset). On the other hand, the land rental market has been shown to allow some re-allocation of land to holdings with enough capital and labour endowments but too little land. A share of the rented land is also the consequence of land inherited from both families being possibly too

distant to be farmed and, more significantly, of a growing strata of non-farmer landlords: these, of course, include urban absentee or local investors, *but also* many children of farmers who have inherited shares of land but moved out of agriculture (to regional centres or to Bangkok). Land is also released to the rental market by a growing number of ageing *inactive* farmers, who prefer to content themselves with a rent rather than farming by themselves or through hired labour. The growth of these categories of “non-farming landowners” is the main cause of the slight increase in tenanted land observed over the 1978-93 period.

13. Even Pathum Thani’s historical feature is now becoming a thing of the past. With the dramatic decrease of farm land, the most remote areas, including mostly owner-operated orange tree gardens, almost outweighed the landlord areas and the dominance of tenancy.
14. The rental arrangements and the types of rents have been shown to greatly vary according to the relationships between owners and tenants, the price of rice, the projected land use and, more generally, the level of water control. Share-cropping is now almost a thing of the past and is found only in bordering rainfed areas or in some parts of the flood-prone area. Most of the rents are now expressed in fixed-cash, sometimes in kind (*thang/rai*), the latter being resorted to in case of short periods of high rice prices, in order to pass on some additional benefit to the landowner.
15. Rental contracts are characterised by a high flexibility. While short term (often one year) and unwritten contracts are often denounced as precarious and conducive to under optimal plot investments from the farmer’s side, there is no evidence that they are perceived as such by tenants. Contracts with urban landlords are the most stable and contrarily to common wisdom, the lowest (land sale is also many times associated with a clause of rental to the former owner); other contracts are most often (55%) between relatives, kinsmen or neighbours and are socially rather stable. On the other hand, this flexibility also serves tenants, who may withdraw from commitment in case of low rice prices.
16. It appears extremely hazardous to associate categories of tenure and farm size with both wealth and social classes. Large farms are often found to be divided over time and there is no indication that notions of class struggle, class interest or class reproduction are concepts adapted to the Central Thailand rural context.
17. Generally speaking “no sentimental attachment or other social value is associated with continued possession of a particular plot and there is no belief that if land is to be sold then it should be to kin rather than to outsiders” (Kemp, 1992). This cultural feature brings fluidity to the reallocation of land, by rental or sale.

18. The analysis of the historical evolution of rents, despite the difficulty to define average values, has evidenced a decline of real rents, at least since the late 60's, and has shown that they were on the average not extortionate, although often comparatively very high in particular locations of the flood-prone area where yields are lowest. Rents in kind are most often in the 8-15 *thang/rai* bracket; actual cash rents are around 500 baht/*rai/crop*.
19. The "terms of trade" between the landowner and the tenant have been put in historical perspective. Through the evidence of periods of crisis and relative prosperity, it has been shown that these have significantly varied over time. With the exception of the very beginning of the century and of the crisis *circa* 1970, the bargaining power of the landlords has been found rather limited, and sometimes weak. Before WWII it has been limited by the availability of land and by the non-coercive nature of their power. As for the last two decades, while the demand for land probably remains on the whole higher than supply, there are nevertheless indications that the market is rather balanced and can even give way to some idle land when rice prices decline.
20. The land purchase market has skyrocketed, pushed by the high prices fetched around Bangkok. This has led to a growing disjuncture between the market value and the agricultural income which can be drawn from a piece of land. Urban landlords tend to reinvest further north in the delta, or in other regions, the huge benefits obtained by selling the land absorbed by the growth of Bangkok. Land tends to be no longer bought by farmers for farming, but by investors for speculative purposes. There is a dramatic lack of updated data regarding the possible concentration of land ownership in the hands of urban investors¹⁶⁵.
21. A consequence of this is that the "family cycle" is partly broken: while new nuclear families were supposed to meet the needs of an increasing family by accumulating capital and increasing farm land, both by renting-in and purchasing, the last solution is now ruled out, increasing the pressure on the rental market (which ensures alone the re-allocation of land) and curtailing farmers' incomes through rents.
22. The failure to recognise the logic of the *family cycle* leads to a static vision of landownership, and more generally, of farm land endowment. A large part of the distribution pattern of farms by size (and of the rental market) is a mere consequence of this cycle. This relationship, however, is increasingly loosened,

¹⁶⁵ Computerised data from the Land Office should be able to be used in order to draw a picture of agricultural land acquisition by urban investors. See also the note of Annexe 17 about rural studies in the central Plain.

as intensification and increased off-farm job opportunities provide an alternative to augmenting the farm size.

23. The skewed distribution of land is partly compensated for by the re-allocation of the labour force. While, in the past, land endowment was adjusted to fit the labour force of the family, it is now labour which moves to match land (and off-farm opportunities).

24. Another important practical evidence from the data presented in this study is that, depending on the level of aggregation considered, the results may be contradictory and misleading. Adding Suphan Buri to our 5 other provinces sometimes sufficed to reverse conclusions; considering data relative to the administrative Central Region appears drastically misleading, as it includes uplands and lowlands with totally different dynamics¹⁶⁶. By looking at trends at the *changwat* level, we believe to have avoided most of the pitfalls which made many studies on land tenure inconclusive or contradictory.

At this stage, it is worth reminding the reader that the discussion above refers exclusively to the (irrigated) Chao Phraya Delta and that it would be highly irrelevant to extrapolate any of our conclusions to a wider scope, obviously the national one but also even the regional one (Central Region). The four regions of Thailand are extremely varied and contrasting. This is one of the reasons which undermine many studies attempting to propose an overall analysis of Thailand. The Chao Phraya Delta stands out as a peculiar and somewhat exceptional part of the country, not only because of its historical records as the main commercialised rice bowl of the country, but also because many of the problems affecting other regions tend to be less acute: land disputes are virtually unknown and land registration has long been completed; infrastructures in irrigation and dry-season cropping, although not allowing the full agricultural potential to be realised, have allowed the stabilisation of production; capital endowments and access to credit are much higher than in other regions; such are, also, transportation facilities, the connections with urban and export markets, and the opportunities for non-agricultural work.

While the data in hand do not allow a definitive conclusion on the evolution of the land system, it is our contention that, at least, two positions must be avoided: the overly pessimistic view that the delta is facing a deepening crisis, which some have been tempted to adopt when considering some periods of history or particular parts of the delta, is – by and large - not supported by the data exhibited in our analysis. Such a view might rather be counterproductive as it may impede one to reckon the

¹⁶⁶ Hence the contradictory stances on land tenure found in the literature, often compounded by the use of data of poor quality. Many reports – especially provincial ones- offer statistics interpolated from other data or extrapolated from limited surveys. We have here considered basically censuses and other large scale surveys.

evidence that several factors have contributed to improve the situation, especially in the last quarter of century, creating sometimes a sheer and positive contrast with other regions of Asia. On the other hand, one should not avail oneself of such a record to be overoptimistic and to downplay the seriousness of some worrying aspects of the agrarian and land systems (limited supply of local non-agricultural activities, price fluctuations, blocking of the re-allocation of land through purchasing, etc).

In addition to the blurring of the frontier between rural and urban domains alluded to earlier, the study has also pointed out to an emerging wider structural change which might foreshadow far-reaching evolutions of agriculture. In the last 10 years, the agricultural labour force in the Central Region has declined from 3.5 to 2.5 million people, with a drastic depletion of the younger age class. Due to the advance in educational standards and the rising opportunity cost of labour, this process is unlikely to be reversed. With an ageing and shrinking population of farmers, the demise of agriculture could develop and reach proportions only witnessed in Malaysia (in the region). With the continuing process of agricultural commercialisation, we might see the confirmation and the expansion of larger farms devoted to rice cultivation on a larger scale.

The final picture is one of a growing process of specialisation (Pingali, 1997) leading to (very) small farms dedicated to intensive cash crops or animal productions, larger farms specialising in the mechanised agriculture of rice and medium holdings characterised by extensive pluri-activity and drawing most of their income from non-farm sources (as seen in East Asia). The respective profitability of rice and sugar cane cultivation, fruit production and aquaculture, as compared with the supply and remuneration of non-farm activities will determine the pace of the transformation. The pressure on land, especially as manifested by the evolution of the rental market and tenure patterns, will reflect this wider transformation.

9 Annexes

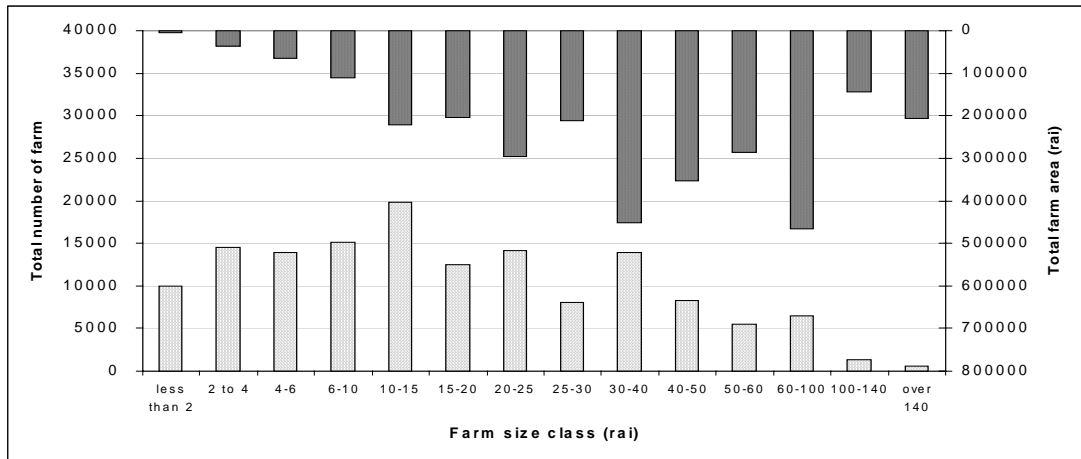
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ANNEXE 1: SET OF *AMPHOE* DEFINING THE « RURAL DELTA »

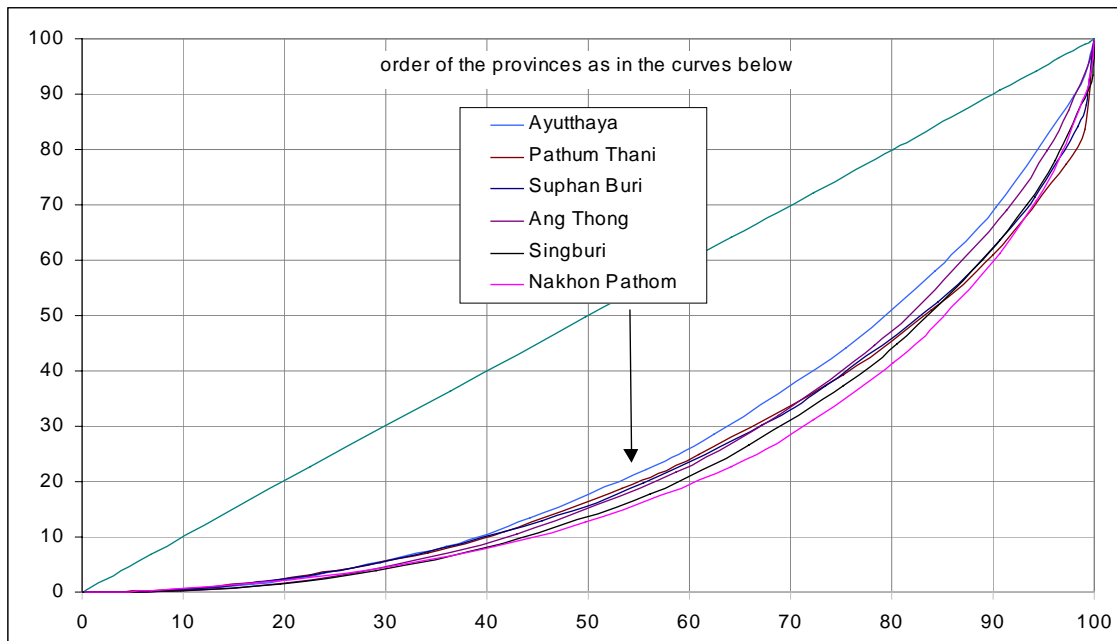
ANNEXE 2: DISTRIBUTION OF HOLDINGS BY FARM SIZE CLASS AND PROVINCE

ANNEXE 3: NUMBER OF FARMS AND CULTIVATED AREA BY TENURE TYPE AND PROVINCE

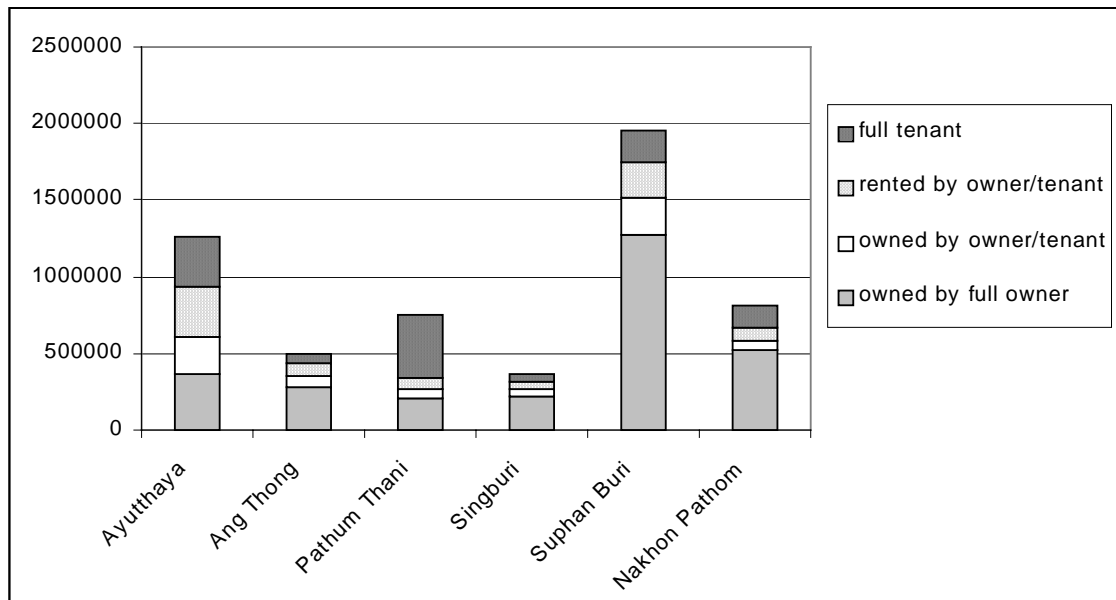
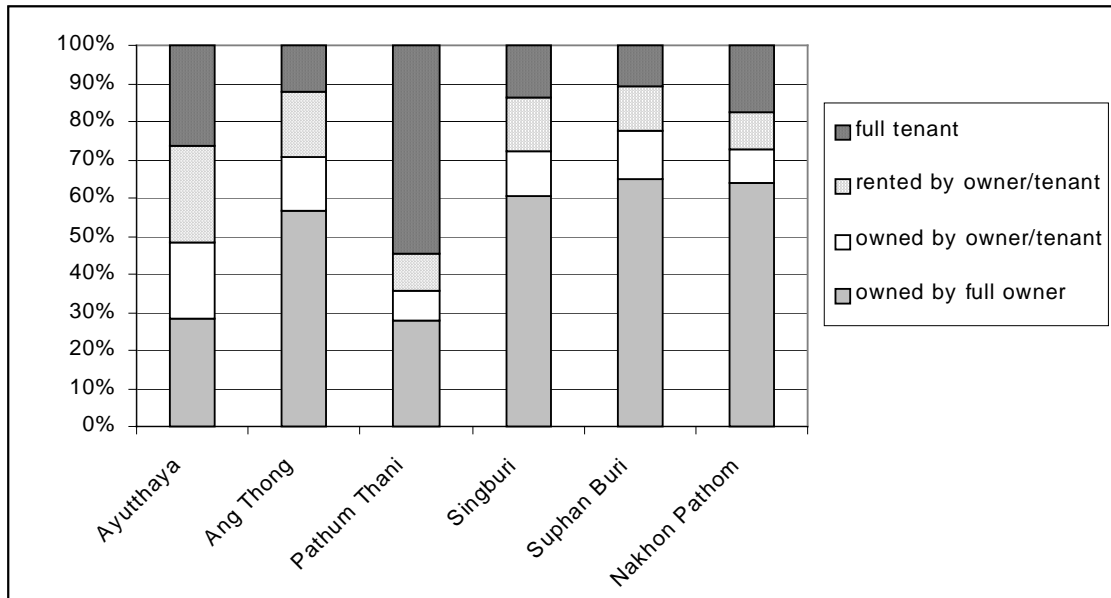
ANNEXE 4: DISTRIBUTION OF THE NUMBER OF FARMS AND CORRESPONDING AREA IN 1993



ANNEXE 5: GINI CURVES FOR THE 6 PROVINCES

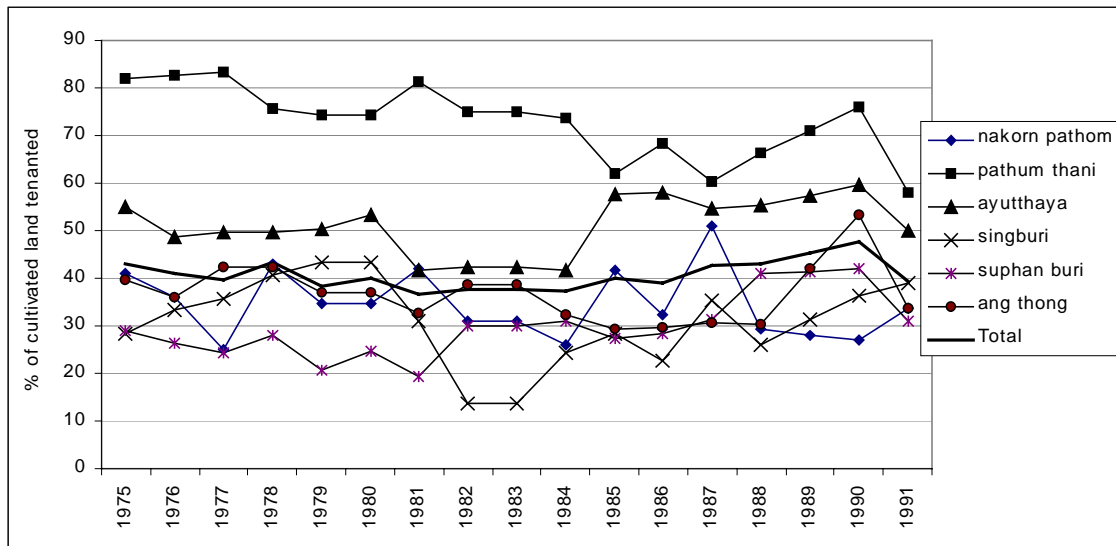


ANNEXE 6: TENURE TYPES BY PROVINCE, IN PERCENTAGE OF TOTAL FARMS (1993)

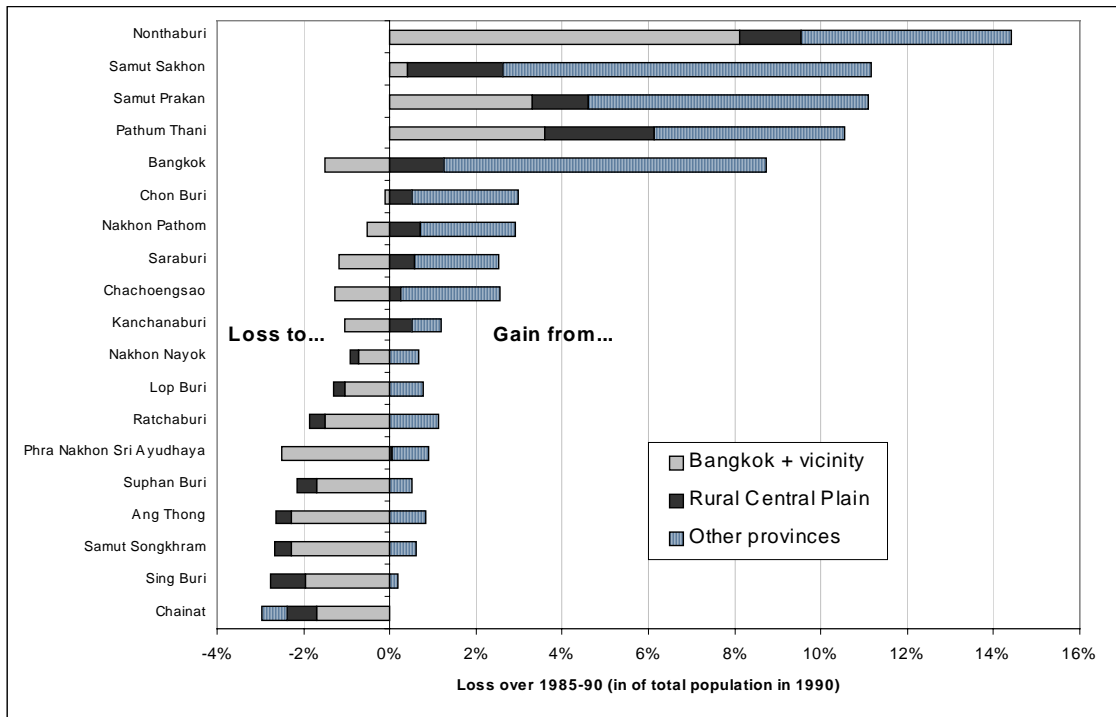


ANNEXE 7: EVOLUTION OF THE TENANTED AREA BY PROVINCE

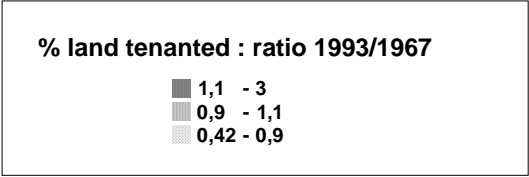
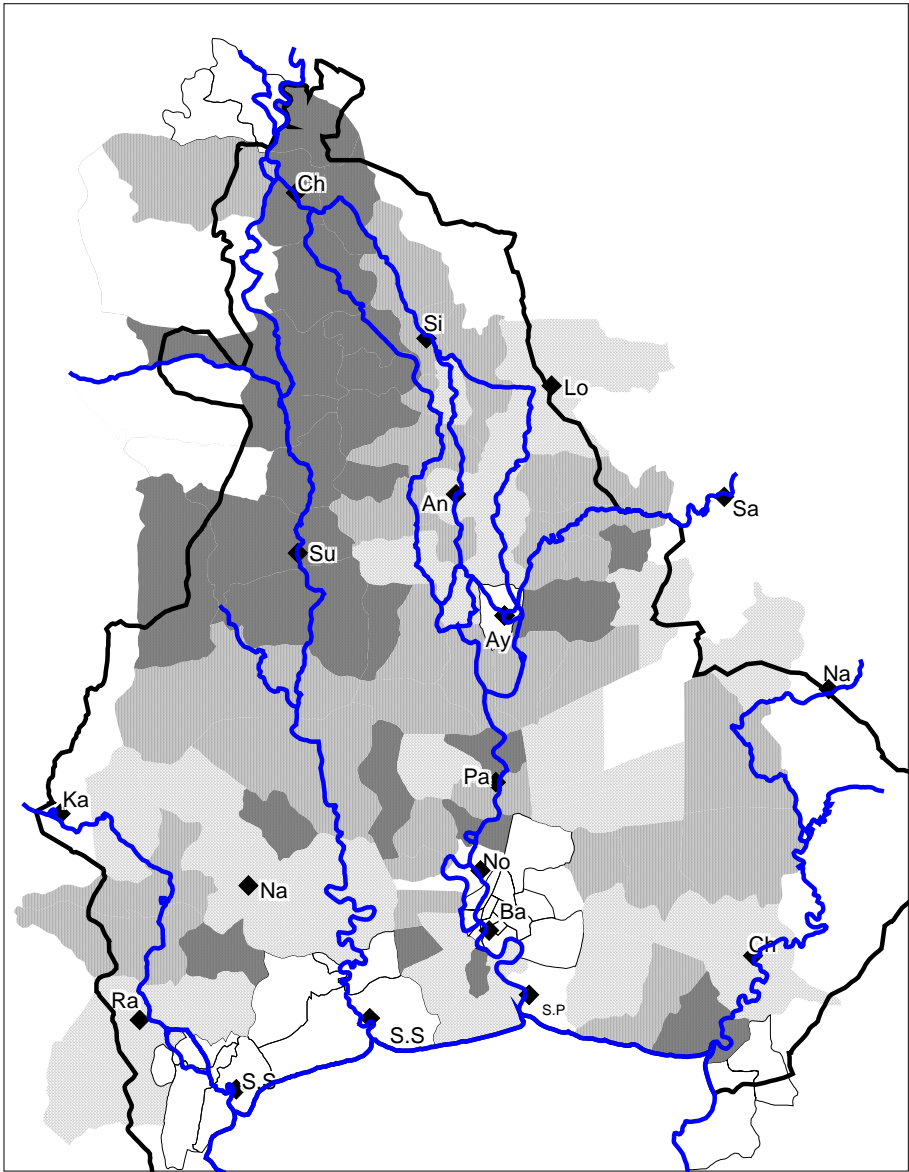
ANNEXE 8: TENANTED LAND BY PROVINCE, 1975-1991 (OAE, 1994)



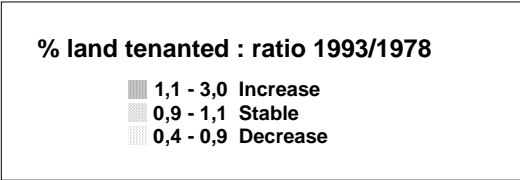
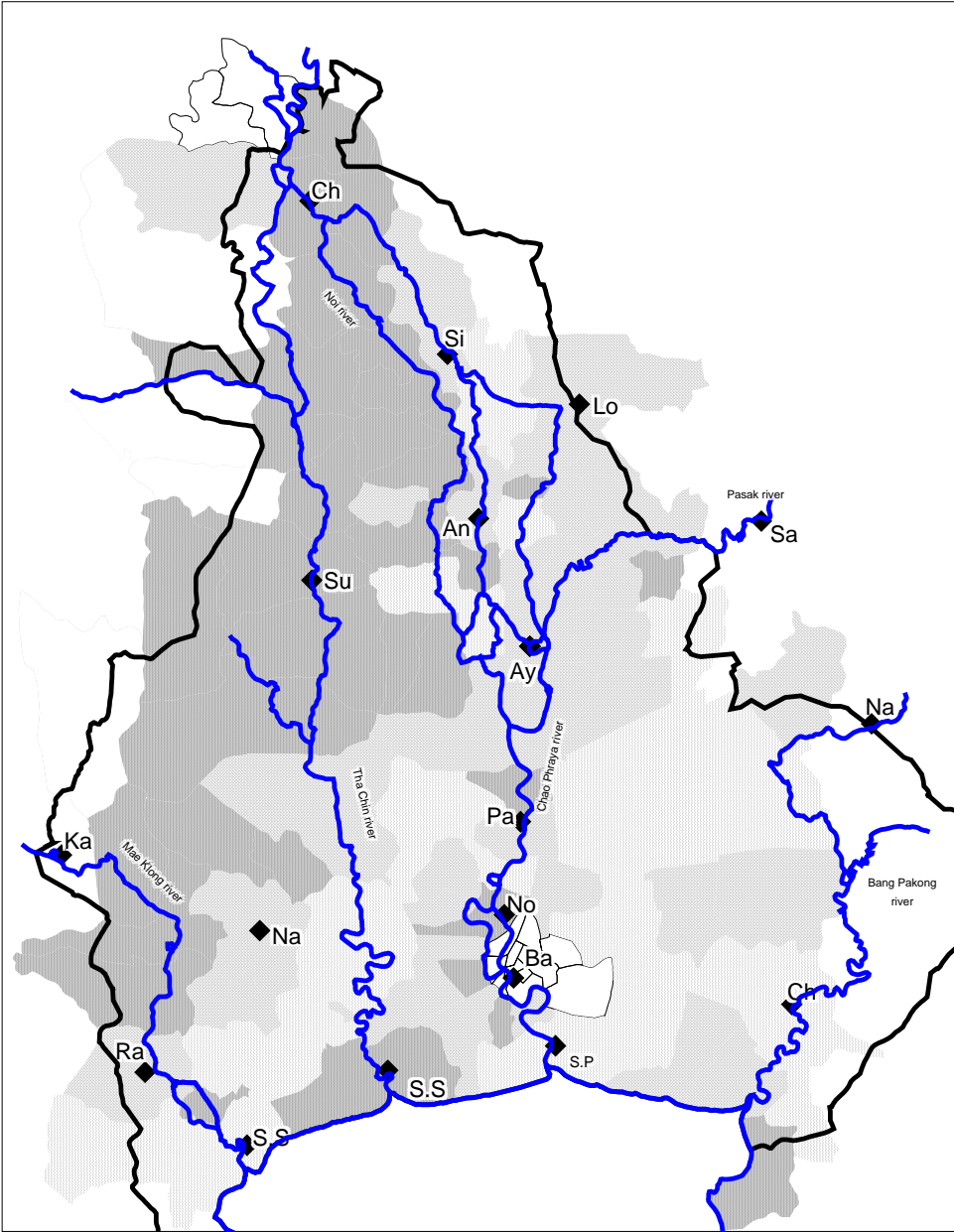
ANNEXE 9: MIGRATION FLOWS FOR EACH PROVINCE OF THE CENTRAL PLAIN



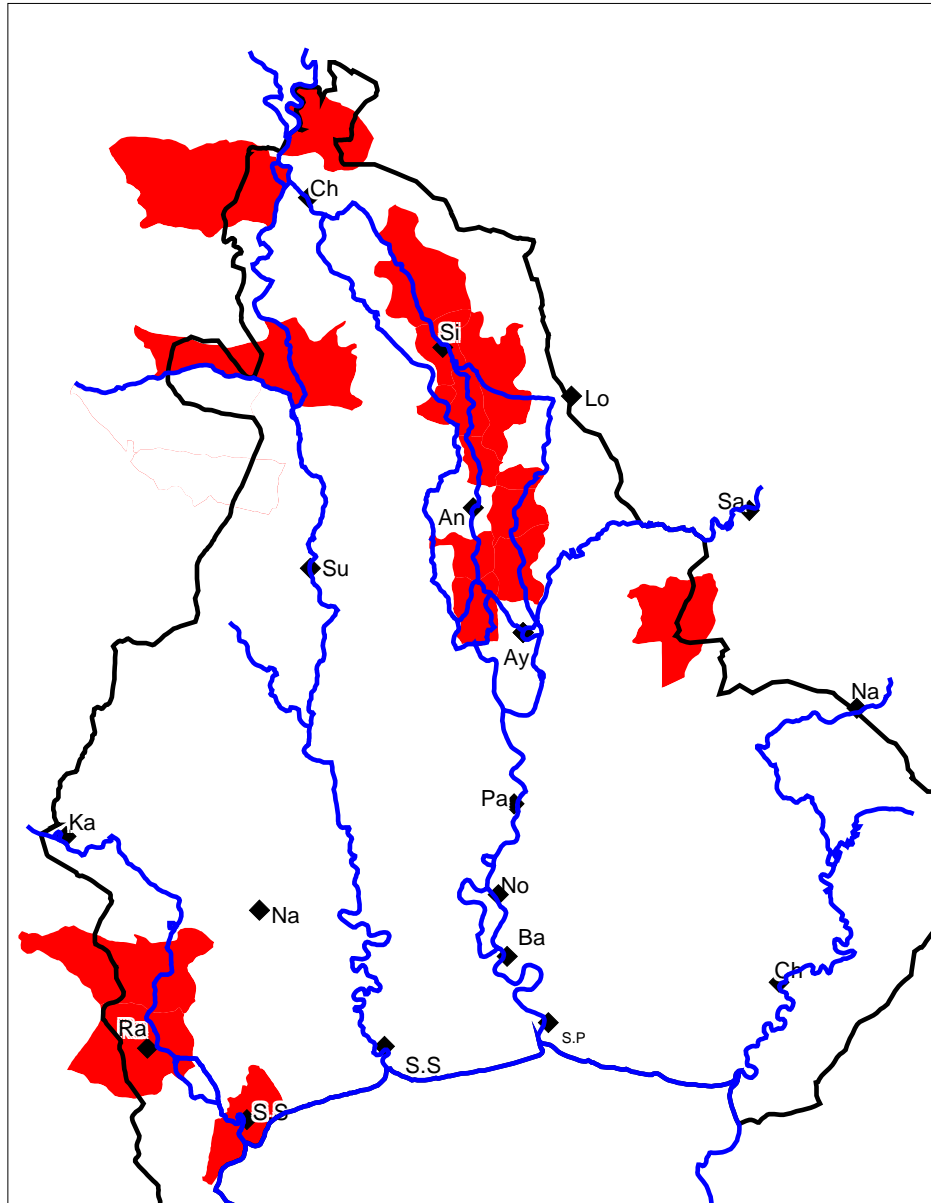
ANNEXE 10: SPATIAL DISTRIBUTION OF CHANGE IN TENANCY BETWEEN 1967 AND 1993



ANNEXE 11: SPATIAL DISTRIBUTION OF CHANGE IN TENANCY BETWEEN 1978 AND 1993

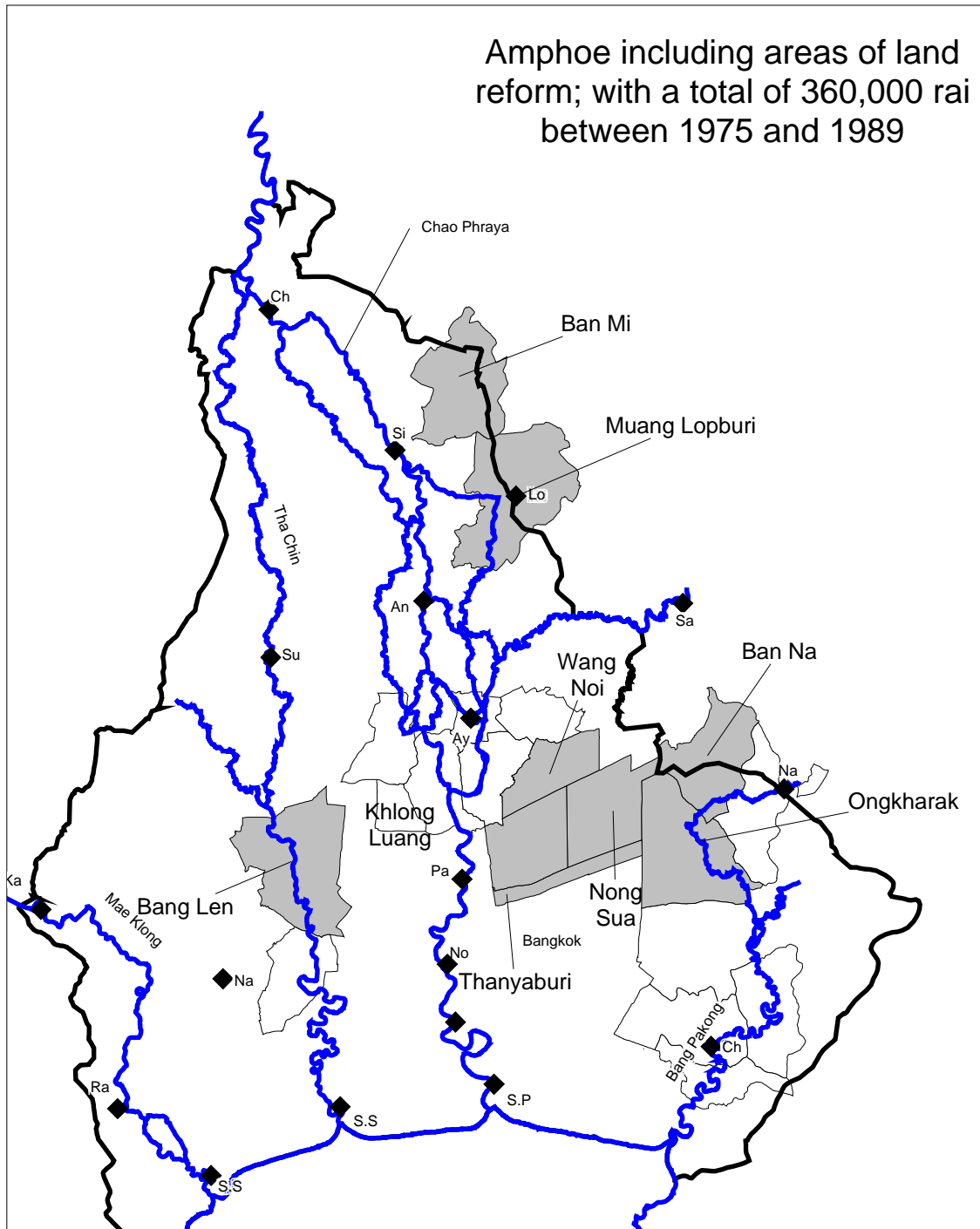


ANNEXE 12: MAP OF THE RURAL DELTA SHOWING AREAS WITH REMAINING CROP SHARE TENANCY



Amphoe with share cropping over 15% of all rental arrangements (1993)

ANNEXE 13: MAP OF DISTRICTS INCLUDING LAND REFORM AREAS



Amphoe in grey and in white correspond to two sources of data (ALRO). Land reform only concern some parts of these *amphoe*

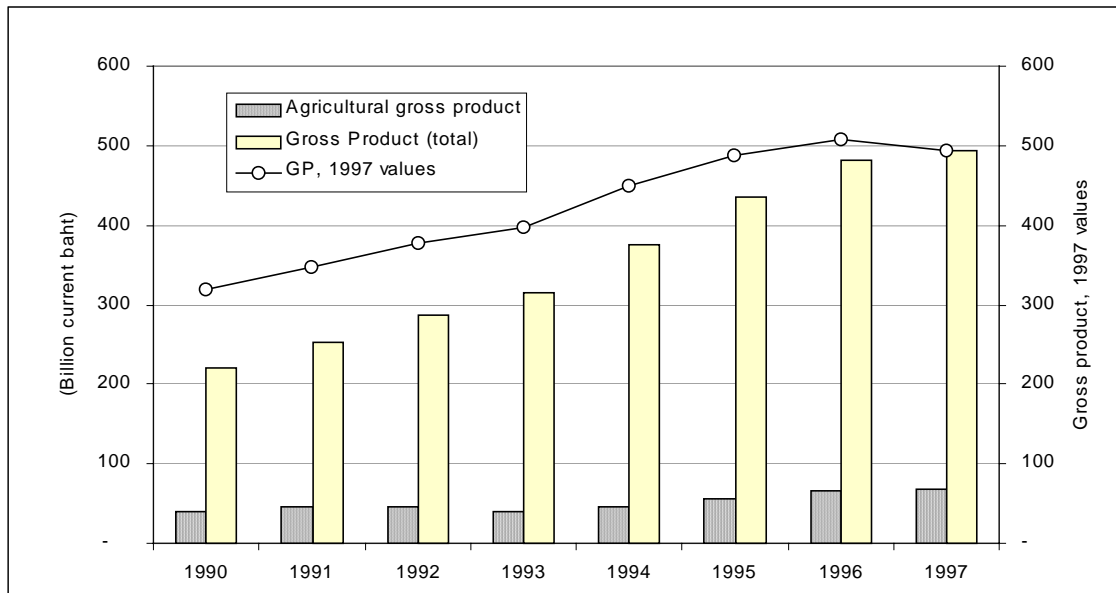
ANNEXE 14: TYPES OF RENT, BY PROVINCE (IN %), AGRICULTURAL CENSUSES

Province	1963		1978		1993	
	in cash	in kind	fixed amount	share	money or produce	share
Ayutthaya	53	47	75	25	95	5
Ang Thong	52	48	46	54	90	10
Pathum Thani	50	50	90	10	97	3
Sing Buri	62	38	62	38	85	15
Suphan Buri	45	55	63	37	92	8
Nahkon Pathom	57	43	83	17	99	1

ANNEXE 15: VALUE OF RENTS BY PROVINCE, 11 PROVINCE SURVEY (CHAIYONG ET AL. 1965)

Changwat	Part tenants						Full tenants					
	Cash	1/2	fixed	1/3	average		cash	1/2	fixed	1/3	average	
	Baht/rai	thang/rai	thang/rai	thang/rai	baht/rai	% prod	baht/rai	thang/rai	thang/rai	thang/rai	baht/rai	% prod
Bangkok	69	-	8	-	63	25	38	-	8	-	57	22
Thonburi	61	-	10	-	65	29	54	-	9	-	83	26
Samut Prakan	103	-	10	-	82	33	99	-	10	-	85	33
Chachoengsao	30	-	7	-	47	22	24	-	7	-	51	23
Phetburi	76	15	10	-	111	47	81	15	9	-	111	47
Kanchanaburi	96	9	10	6	50	39	-	9	-	5	37	32
Sraburi	120	14	8	9	79	34	57	14	8	-	70	30
Chai Nat	92	16	11	-	90	39	96	-	12	-	92	38
Sing Buri	96	11	12	7	86	55	100	11	12	-	82	52
Supanburi	89	12	9	8	76	41	91	12	9	8	74	42
Nak. Pathom	73	-	10	-	81	33	42	-	8	-	67	27
All provinces	81	14	9	7	75	33	69	13	9	5	72	31

ANNEXE 16: EVOLUTION OF GROSS PRODUCT IN THE CENTRAL REGION, BANGKOK AND VICINITY EXCLUDED
(1990-1997)



source: NESDB

ANNEXE 17: NOTE ON RURAL STUDIES WITH REGARD TO THE CENTRAL PLAIN

The record of surveys and studies devoted to the question of the land system deserves a comment. Judging from the table below, we may observe that the crisis period of the late sixties and seventies corresponds to a period of intensive large-scale surveys and scholarly work, in particular village studies and PhD thesis. If we take the 49 principal documents gathered and used in this study, their distribution over time¹⁶⁷ can serve as a *proxy* of the intensity of the problems faced by the rural delta. It is striking to see note that the great majority of the 49 main studies elected have been issued in the late sixties and the 1970-85 period. Even if we consider other studies which do not specifically address the questions of land or tenure (in particular some more recent work in political sciences), it is hard to avoid the evidence that rural studies concerning the Central Plain are declining. Whether this must be interpreted as a decrease in interest or a lack of “hot issues” to be addressed is left open.

RECORD OF MAIN STUDIES ON THE LAND SYSTEM (CENTRAL REGION)

Type of study	1950's	1960's	70-75	76-80	81-85	86-90	91-95	96-00
Primary data; Village study, PhD Thesis, survey	3	8	9	8	6	0	2	0
Analysis ; secondary data	0	2	4	2	5	0	0	0
Total (49)	3	10	13	10	11	0	2	0

¹⁶⁷ The year considered is that of the field work, not of the publication.

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