



**UNIVERSITI PUTRA MALAYSIA**

**THE ECONOMICS OF SHARECROPPING: A STUDY  
OF TWO TARAI VILLAGES OF NEPAL**

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THE ECONOMICS OF SHARECROPPING: A STUDY  
OF TWO TARAI VILLAGES OF NEPAL

By

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The issue of resource allocation under share tenancy system has always been a fruitful source of controversy in economic literature. The Marshallian economists believe that the share tenants apply variable inputs less intensively than the fixed rent tenants or owner operators while the Cheungian economists argue that there would be no difference in input intensity across the tenure systems. This study examines the empirical validity of these two approaches, using evidence from the two tarai villages of Nepal.

In particular, this study examines the differences in input and output intensities among three different types of plots of the paddy farmers-- owned (A) and shared (B) plots of mixed share tenants and shared (C) plots of pure share tenants-- for three different cases



i.e., A-B, A-C and C-B. Mixed share tenants are farmers who rent in land besides cultivating own land. Pure share tenants are farmers who rent in land with no land of their own. The significance of these differences in input and output intensities were measured by employing two test procedures. An F-test based on Hotelling's  $T^2$  statistic was employed to measure the significance of differences in input and output intensities. The second test, which is based on Shaban's methodology, measures the impact of tenancy on input and output intensities by isolating the pure tenancy effect from the total variation in input and output intensities. Shaban's methodology was modified to incorporate two new variables, variety of paddy and plot size, in the model.

The findings of the study reveal that the total differences in input and output intensities are partly explained by the differences in plot specific characteristics and partly by tenancy effect. Among the plot specific characteristics, plot size is found to be the most important variable in accounting for the differences in input and output intensities.

The results of the study also indicate that the share tenants (plots B and C) apply inputs less intensively than the owner operators (plot A). Within sharecropping, the pure share tenants (plot C) use more



non-shared inputs compared to the mixed share tenants (plot B).

After accounting for the impact of plot size, soil quality and the variety of paddy, the impact of sharecropping is to use lower inputs and produce lower output. The impact of sharecropping is highly significant, especially in the case of non-shared inputs such as compost, bullock power and family labour. These findings support the Marshallian school in the sharecropping controversy. This is consistent with Shaban's conclusion.



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EKONOMI LADANGKONGSI: SATU KAJIAN  
DI DUA BUAH KAMPUNG LEMBAH, NEPAL

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Isu alokasi sumber di bawah sistem sewa kongsi selalu menjadi punca kontroversi yang berguna dalam penulisan ekonomi. Ahli-ahli ekonomi Marshallian berpendapat bahawa penyewa berkongsi menggunakan input berubah yang kurang daripada penyewa tetap atau pemilik, manakala ahli-ahli ekonomi Cheungian pula berpendapat bahawa tidak ada perbezaan di dalam penggunaan input bagi kesemua sistem sewa. Kajian ini mendalami kedua-dua perdebatan di atas melalui kajian empirikal dengan menggunakan bukti kajian daripada dua buah kampung lembah di Nepal.

Secara terperinci, kajian ini melihat pada perbezaan antara intensiti input dan output di kalangan tiga jenis petani padi: pemilik petak tulen (A), pemilik kongsi (B) dan penyewa tulen (C), iaitu A-B, A-C dan C-B. Penyewa kongsi campuran adalah petani yang



menyewa ladang di samping mengusahakan ladang sendiri. Penyewa kongsi tulen adalah petani yang menyewa ladang dan tidak mempunyai ladang sendiri. Ujian signifikan bagi penggunaan intensiti input dan output telah diukur melalui dua prosedur ujian. Ujian-F berdasarkan Statistic  $T^2$  Hotelling telah digunakan untuk mengukur perbezaan signifikan di dalam intensiti-intensiti input dan output. Ujian kedua yang berdasarkan kepada metodologi yang telah digunakan oleh Shaban untuk mengukur kesan sewaan ke atas intensiti-intensiti input dan output dengan mengasingkan kesan sewaan tulen daripada jumlah variasi intensiti-intensiti input dan output. Metodologi Shaban telah diubahsuaikan dengan memasukkan dua angkubah yang baru iaitu jenis padi dan saiz petak di dalam model kajian ini.

Dari kajian ini kita mendapati bahawa jumlah perbezaan dalam intensiti input dan output sebahagiannya disebabkan oleh perbezaan ciri spesifik petak dan sebahagiannya disebabkan oleh kesan sewaan. Di kalangan ciri-ciri spesifik petak, saiz petak merupakan angkubah yang mustahak bagi mendapatkan perbezaan dalam intensiti input dan output.

Keputusan kajian ini menunjukkan bahawa penyewa kongsi (petak B dan C) menggunakan kurang intensiti input daripada pengusaha tanah sendiri (petak A). Dalam sistem sewaan, penyewa tulen (petak C) menggunakan

lebih banyak input sendiri dibandingkan dengan penyewa campuran (petak B).

Setelah mengambilkira kesan saiz petak, kualiti tanah dan jenis padi, didapati tanaman kongsi telah menyebabkan penggunaan input yang kurang dan output yang rendah. Kesan tanaman kongsi adalah tinggi signifikan terutama untuk kes input yang tidak dikongsi seperti kompos, kuasa lembu dan buruh keluarga. Keputusan kajian ini telah menyokong pendapat sekolah Marshallian dalam kontroversi tanaman kongsi. Kajian ini juga konsisten dengan keputusan yang diperolehi oleh Shaban.



**CHAPTER I**  
**INTRODUCTION**

**An Overview of Agriculture Sector of Nepal**

Agriculture plays a major role in the Nepalese economy. Agriculture provides 92 percent of employment, 61 percent of GDP and 80 percent of export earnings (His Majesty's Government (HMG)/Nepal, 1991). Cultivation of food and cash crops is the basic form of agriculture in Nepal. Major food crops are paddy, maize, wheat, barley and millet, while cash crops include sugar-cane, oil seeds, tobacco, jute and potato.

The total cultivated area in 1988 was 3,169,000 ha, while the area covered by the food crops alone was 2,888,000 ha (91.13 percent). Paddy was the principal food crop both in terms of total cropped area (which was about 50 percent of total cropped area of principal food crops in 1988) and output produced. In 1988, paddy contributed to about 63 percent of total principal food crops produced (HMG/Nepal, 1989).

Despite the increased level of investment in agricultural infrastructure in previous seven successive development plans (1956-1990) and the implementation of land reform programme in 1964 with



the sole objective of developing the agriculture sector, the performance of the agriculture sector, however, had not been very encouraging. The productivity index of principal food crops remained stagnant during the fiscal years 1976/77 to 1987/88 at its 1974/75 level. Although there appeared a slight improvement in the performance of the agriculture sector after the fiscal year 1987/88, it had not yet been able to raise the per capita agricultural production of the country (HMG/Nepal, 1991).

Inadequate supply of modern inputs, lack of marketing services, small and fragmented holding size and low level of literacy rate among the farmers are often reported as the reasons for such bleak performance of the Nepalese agriculture (Pandey, 1987: 523-24). An adequate supply of such agricultural infrastructure, however, does not ensure an increase in productivity. The farm productivity is often believed to be determined by the motivation of the farmers to apply available resources optimally. Therefore, various efforts have also been made to provide incentives to the actual tillers through implementing land-to-the-tiller legislations. In this respect, various institutions involved in Nepalese land tenure systems before and after 1951 are discussed in the following sections.



## Land Tenure System in Nepal

### Land Tenure System Before 1951

Traditionally, land in Nepal belongs to the state. The state had used land to consolidate its power, maintain its functionaries, and please relatives and friends. Land grants were given to individuals and institutions on various occasions and with various conditions. Land was also granted to government employees in lieu of cash emoluments (Regmi, 1976).

The pre-reform land tenure systems of Nepal were generally classified as Raikar, Birta, Jagir, Rakam, Rajya, Guthi and Kipat. Birta, Jagir, Rakam and Rajya land tenure systems were abolished and do not exist in the present system. The Raikar tenure system was a form of state landlordism. Under this tenure, land was granted to individuals upon payment of a fixed annual revenue (land tax). This Raikar land was inheritable, transferable and divisible as long as the occupancy rights remained intact. The Raikar system was the predominant tenurial form which accounted for 50 percent of total tenanted land in the country (Ram Bahadur, 1986: 2).

Birta, Jagir, Rajya and Rakam tenurial forms emerged through the land grants provided by the state to various individuals. The Birta land was the most privileged form of land tenure (Regmi, 1976: 22-45).



Birta holders had rights to possess, occupy, transfer, and mortgage. The Birta system accounted for 36.3 percent of total tenanted land (Zaman, 1973).

The Jagir tenurial form was the land grant provided by the state to its functionaries in lieu of cash emoluments. Mostly, rights of the awardees were time-bound and limited to the appropriation of revenue. The Rakam system was the land grant provided for specific jobs done such as those of carpenters, brick layers and mail carriers (Ram Bahadur, 1986: 22).

The Rajya land tenure system was a form of princely state award given to the royal family members and relatives. This tenure system emerged after the unification of Nepal, which was divided into 22 states, ruled by independent monarchs. Even after unification, these monarchs were allowed to retain the ownership of the land within their territory upon payment of a nominal tax as a token of allegiance to the central authority in Kathmandu (Koirala, 1987: 4).

The land grant system was initiated by the state to bring new land into cultivation, especially in the tarai (plain area) region which was mainly covered by forests, and the climatic condition in this region was not considered suitable for permanent settlement until the malaria eradication programme was launched in the late 1950s. Such grants were basically provided to

"government employees, members of the nobility and other persons in favour" (Feldman and Fournier, 1976: 450).

The Guthi system emerged from religious considerations, under which the ownership of land was granted to the temples, monasteries and other religious and philanthropic institutions. This land was usually cultivated by individual tillers who were required to pay fixed amount of rent, mostly in kind. Before the land reform, Guthi land comprised of 2 percent of total cultivated land (Ram Bahadur, 1986: 2) and was inheritable, divisible and transferable at the occupancy level.

Kipat was a communal land tenure system, which accounted for 4 percent of tenanted land (Ram Bahadur, 1986: 2). Its sale outside the Limbu community was prohibited by law. This land was also taxed by the state as Raikar land (Pant and Jain, 1969: 49).

These different land tenure systems gave rise to complex institutional mechanisms. The various interest groups involved in these mechanisms were: i) the state and its agents (Talukdar or Zimawala in the hills and Zamindar and his assistants, Patawaris, in tarai region), who were authorised by the state to collect revenue; ii) intermediate landlords and their managers; and iii) the actual tillers, who till the land mostly

as a sharecroppers (Pant and Jain, 1969: 50). None of the parties involved in this system paid much attention to farm improvement. Farm productivity was low and erratic. There were evidences when even the landlords were unable to pay land tax from their share of farm produce. As a result, their land was confiscated by the government (Feldman and Fournier, 1976).

In 1961, about 46 percent of the total households owned only 10 percent of the total cultivated area whereas the top 8 percent households owned nearly 40 percent (Central Bureau of Statistics (CBS), 1985). Those bottom 46 percent of the households farmed plots of less than 0.5 ha, which was not sufficient to meet even their bare necessities (Seddon, 1987: 119). The land distribution was highly skewed. Moreover, the degree of land concentration was higher in tarai compared to hilly region (Feldman and Fournier, 1976).

### **Land Tenure System After 1951**

With the advent of democracy in 1951, various measures were taken to regularise the land market in Nepal. The first step in this respect was taken in 1951 when Tenancy Rights Security Act was passed. Throughout the decade of 1950s and early 1960s various attempts were made to adopt agrarian reform measures. The Land Act of 1957 made legal provisions for the security of tenancy and eviction, and exempted tenants from unpaid

labour services and other extra levies. The amendment to The Land Act in 1959 made tenancy rights heritable and transferable.

Intermediate tenurial arrangements such as Jagir, Birta, Rajya, and Rakam were abolished in 1952, 1959, 1961 and 1963, respectively. The Birta land was converted into Raikar and tenancy right was given to the actual tillers. According to Zaman (1973), less than 10 percent of total cultivated area was affected by these reforms.

Finally, a comprehensive land reform programme was implemented in 1964 with the promulgation and enforcement of Land Act, 1964 and Land Rules, 1964. The major objectives of the Land Reform Programme include: i) diversion of surplus resources from land to other productive sectors to accelerate economic development; ii) equitable distribution of land; and iii) improve living standards of real tillers through dissemination of technology.

The land reform of 1964 abolished the Zamindari and other intermediary interests in land. It fixed land ceilings for the landlords as well as the tenants (for the landlords: 18.4 ha, 4.91 ha and 3.1 ha and for the tenants: 2.5 ha, 1.0 ha and 0.50 ha in tarai, hill and Kathmandu valley, respectively). The land reform programme also fixed the rent at a maximum of 50

percent of gross produce and made legal provisions for tenancy rights. Under this programme, tenancy rights were provided to all tenants who had been tilling the land for at least one main crop.

In subsequent amendments, the absolute amount of rent payable to the landlords was fixed for different categories of lands. However, this officially fixed rent applied only for 27 districts. For other districts, it was fixed at a maximum of 50 percent of the produce from the main crop. The amount of rent fixed by the government on such rented lands varied between districts and it was lower than the amount paid by non-registered tenants. For Kathmandu Valley, it was about one fourth of main crop produced in a year (Ram Bahadur, 1986: 17).

The structure of land tenure system after the implementation of land reform programme in 1964, consists of Raikar, Kipat and Guthi. The Raikar land comprises of 94 percent of the total cultivated area, while Kipat and Guthi land are about 4 and 2 percent respectively (Zaman, 1973).

Even after the implementation of land reform programme in 1964, the degree of inequality in land ownership has not yet declined. Moreover, the number of families holding uneconomic size of land has increased from 46 percent in 1961 to about 56 percent in 1971

(CBS, 1985). The share of these 56 percent families in the total cultivated land is merely 12 percent while the top 6 percent families owned about 44 percent. Most of these large holders are absentee landlords who lease out their land to the sharecroppers (Asian Development Bank/His Majesty's Government/Nepal, 1982: 102).

### **Incidence of Tenancy and Sharecropping**

There is a lack of reliable statistics on the frequency of various tenancy groups in Nepal. According to the records in the Department of Land Reform, there were about 560,000 tenants during land reform, of which 318,500 tenants received tenancy certificates. Zaman (1973) estimated that there were 460,000 tenants in 1971. A survey conducted by Land Reform Department in 1972 reported that 40 percent of tenants were left out during the initial process of tenant identification by the programme.

Census report published by the Central Bureau of Statistics (1985) indicates that the incidence of tenancy is declining over time both in terms of tenant households as well as area under tenancy. In 1961, 25.3 percent of total holdings was under tenancy and 7.1 percent of the total households were tenants, but in 1981 only 6 percent of total holdings was under tenancy and tenant households were 1.5 percent (Bista, 1989: 11).



Since the Land Reform Programme was not sustained for long, the number as well as area under formal tenancy is dwindling over time through legal and illegal eviction. Koirala (1987: 9) reported that 60 percent of the cases filed in Dhanusha District Land Reform Office between 1965/66 and 1984/85 were against the landlords who attempted to evict their tenants. He also reports that some of the tenants were legally evicted through court orders.

Even though the incidence of recorded tenancy is decreasing, the extent of actual tenancy (formal and informal) in Nepal is believed to be much higher than recorded in census reports. Zaman (1973) found that about 32 percent of the farm families lease in land for farming purposes. The Center for Development Studies (1980) had reported that 55 percent of farms in Nepal were owner operated, 21 percent owner-cum-tenant operated, 11 percent tenant operated and 13 percent unclassified (cited in Pant, 1987: 3). Lohani and Khadka (1981) found that 72 percent tenant households in Chitawan and 94 percent tenant households in Tanahu were informal tenants.

In the fiscal year 1982/83, an attempt was made to record tenants left out by the Land Reform Programme and others who became tenant in the subsequent years. However, this effort fizzled out within a month due to the strong opposition from the landed class.





The share of formal share tenancy in total area under tenancy is also decreasing over census years (Table 1). It decreased from 61 percent in 1961 to 49 percent in 1981. Moreover, the incidence of formal share tenancy in tarai region is higher than in hill region. Even in the tarai region, the total area under share tenancy is decreasing over time. While in the census year 1961, 72 percent of the total area under tenancy in the tarai region was sharecropped, it was only 54 percent in 1981.

Table 1

Regional Distribution of Sharecropped Area ('000 ha)

Year	1961		1971		1981	
	Area	%	Area	%	Area	%
Hill	18	21.0	12	29.0	9	30.0
Tarai	243	72.0	161	68.0	63	54.0
Nepal	261	61.0	173	62.0	72	49.0

Source: Ramesh Bista, 1989: 8-9.

The actual incidence of share tenancy is believed to be much higher than recorded in census reports. In a case study of Nemuwatole village of Dhanusa district in Nepal, Pant (1987: 7) found that 69 percent tenants are renting land on a crop sharing basis.

### Statement of Problem

Land is the major productive resource of Nepal. More than 90 percent of people earn their living from

