EXCHANGE RELATIONS IN AN AGRARIAN SET-UP:
CASE STUDY OF A TRIBAL VILLAGE FROM ORISSA

DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF PHILOSOPHY IN APPLIED ECONOMICS OF THE JAWAHARLAL NEHRU UNIVERSITY, NEW DELHI

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*I hereby affirm that the research for this dissertation titled **"Exchange Relations in an Agrarian set-up: Case Study of a Tribal village from Orissa"** being submitted to the Jawaharlal Nehru University for the award of the Degree of Master of Philosophy, was carried out entirely by me at the Centre for Development Studies, Trivandrum.*

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Certified that this dissertation is the bonafide work of Srijit Mishra. This has not been considered for the award of any other degree by any other University.

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All the world's a stage
And All the men and women merely players:
They have their exits and their entrances;
And one man in his time plays many parts.

William Shakespeare
As You Like It.

Chapter 1

Introduction

1.1 A Formal Outline

The history of mankind, in an economic sense, has been a process of specialization[1]. In a very primitive stage, man depended on nature and his own efforts for all his consumption needs. With increasing specialization he became more and more dependent on the efforts of others to satisfy all his consumption needs. This led to the emergence of the exchange economy or the market. Though the emergence of the exchange economy may be considered as a universal phenomenon it has its cultural particulars as well.

In a given cultural set-up, the nature of exchange to a large extent influences the distribution of the produce (and more particularly, the produce of the earth). It is here that the social institutions[2] more or less determine the property rights regarding the ownership of land, and hence, to an extent the ownership of the produce. The above explanation is more or less static. There may also be dynamism in the system. One such dynamism lies in the emergence of the exchange economy. This brings into the domain an economic agent called trader. Here again, in a given set-up the role of the trader may be more specific. The above issues may raise certain questions such as:

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[1] Hicks (1969:1) explains that "the specialization is not only a specialization among economic activities, it is also a specialization of economic activities." Smith (1776) has emphasized this in terms of *division of labour*.

[2] Institutions are accepted laws and customs imbibed in the social, cultural and economic structure.

Is ownership of land concentrated with few households ? If so What is their relationship with the landless households ? Who are the traders? Are they the same persons who own land or a few among them or have they migrated into the region? Do they own certain factors of production which will give them a higher bargaining power over others who own other factors of production and in the process help them acquire the property rights of the assets owned by others? The answer to these questions depend to a large extent on the nature of social interactions.

Social interactions, along with the institutions, evolve over a long period. However, evolution is a result of:

(1) Man's interaction with nature and

(2) Men's interaction among themselves.

In a particular situation (time frame), the social interactions may be more or less stabilized where the economy attains some sort of equilibrium[3]. However, with evolution, the social interactions, the processes of exchange therein and the laws determining the property rights of the produce may get redefined.

The evolution of the social system[4] has been different for different regions or groups. However, if we are to analyse the differences then there must be some criteria. It is here that we revert back to the process of specialization, which can be defined

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[3] Equilibrium is a situation where the institutions, exchange relationships and the laws of the society become a norm. Thereby the individuals behave as per conventions and the economy functions such that all expectations are realized.

[4] A social system includes the social interactions and the institutions.

as progress[5]. The differences can be analysed using the *level* and *pattern* of progress. The former which is a static concept explains the difference between two comparable populations. The latter which is a dynamic concept explains the movement of a population over a period of time. A pattern is the representation of the level at different points of time.[6]

Thus, the differences in the evolution of different regions or groups can be explained by levels and patterns of progress. Levels explain why a particular region or group remains backward[7] vis-a-vis another at a point of time. Similarly, patterns explain why a particular region or group continues to remain backward over a period of time.

It follows that certain regions have remained backward over a

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[5] Thus, absence of specialization implies no progress. Similarly, a movement away from specialization implies a movement away from progress. With the absence of a proper measure of specialization we may use Quality-of-Life as a proxy for specialization, and hence, as an indicator for progress. However, this does not preclude the problem in the measurement of Quality-of-Life.

[6] Say, there are two individuals A and B with incomes Y_{At} and Y_{Bt} at time t. Then one can write that $Y_{At} = \alpha_t Y_{Bt}$, where α_t is the proportion of A's income with respect to B at time t. At a given time if α_t is greater than, equal to or less than unity then Y_{At} will be greater than equal to or less than Y_{Bt}. Hence, at $t = 0$ if $\alpha_0 > 1$ then $Y_{A0} > Y_{B0}$. Similarly, at $t = 1$ if $\alpha_1 > 1$ then $Y_{A1} > Y_{B1}$. Thus, it can be said that A's income continues to remain higher than B's. Here α_t explains the level at a particular point of time but the movement over time, that is from Y_{A0} to Y_{A1} or from Y_{B0} to Y_{B1} is the pattern for A and B respectively.

In the above illustration A and B need not be individuals. They can be any two comparable populations. Similarly, Y can be any variable which can be measured for both A and B over time.

[7] Backward is defined as opposed to progress. It is a relative concept. A region or group is backward compared to another if it has not progressed as much as the other.

period of time. Again, there are certain groups, in these backward regions, who have remained more backward. One such group is the tribals[8] residing in the hilly inland regions. Thus, the focus of this study is to look into:

(1) the impact of the exchange relationships on the distribution of the produce (income) and agricultural production in a backward region, namely Koraput in South Orissa and

(2) how the exchange relationships get redefined over a period of time and have maintained the backwardness of a particular group, the tribals.

Keeping this in mind we will look into the transition of some tribal societies and the agrarian issues — both theoretical and empirical.

1.2 Transition in Tribal Societies

Transition in these societies can occur either due to internal or external forces. The former comes from within the social system and the latter from outside. In many instances it is the external forces which activate the internal forces to complete the process of transition.

When we look up the earliest recorded Indian History we do find the existence of established states as well as independent tribal communities [Furer-Haimendorf (1982a:33); Oppert (1893, Reprint 1972)]. There is also mention of many present day tribes by

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[8] There are conceptual problems in defining a tribal, but, no doubt they have an identity. The term does bring into our minds, their identification with forests and jungles, that they are away from the mainstream of life. However, as per Article 342 of the Vth schedule of the constitution the President is empowered to declare "the tribes or the tribal communities or part of or groups within tribes or tribal communities" as Scheduled Tribes [India (1962:1)].

Ptolemy and Pliny. Though these tribes had their own customs and traditions, they did interact with the established states. This interaction did bring about a process of assimilation or acculturation. The material basis for such interactions is the exchange between the forest produce and the produce of the plains. With the coming of the British the requirement of the forest produce increased thereby accelerating the process of assimilation or acculturation.

The British interest of revenue maximization[9] led to the monetization of the economy. Further, the growth of transportation facilities helped the entry of money-lenders, traders and bureaucrats to these inaccessible areas [Furer-Haimendorf (1982a:34)].

The modus operandi of these money-lender traders led to the indebtedness and subsequent land alienation [Furer-Haimendorf (1982a:34, 1982b:410); Kulkarni (1982:418-422)]. This process of land alienation has continued even after independence [Furer-Haimendorf (1982b:415); Kulkarni (1982:424); Pande (1991); Roy Burman (1982); Viswanthan (1976)]. The major source of livelihood being land, the tribals were either forced to withdraw further into the hills or end up as tenants, share-croppers and agricultural labourers on their ancestral land [Furer-Haimendorf (1982a:33-34). Monetization also did not bring about any investment because of educational and technological backwardness. Rather the economy

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[9] Chaudhry (1992) explains this with regard to the coastal districts of Orissa. In the Indian context this has been explained by Naoroji (1901) and others.

continued to revolve around a system of slash and burn cultivation [Sikdar (1982)].

The penetration of British interests resulted in the confrontation between two different moral and value systems. One, a small scale, pre-monetary tribal society and the other, a wider and more complex market economy. The tribal societies "...social, economic and moral arrangements are organised around the principle of the protection of a stable source of minimum income for its members.... This subsistence ethic will also determine the point at which the members of that community feel threatened or unjustly exploited" [Rotter-Hogen (1982:78)]. The coming of the market transformed land and labour as marketable commodities and also disturbed the tribals' subsistence ethic. This led to many rebellions.

In their revenue earning endeavour the British also looked up to the forests [Joshi (1983:43); Ravindra (1989)]. The local economy and its use of forests was discussed as an unscientific exploitation. Forest Departments were set up to facilitate *scientific exploitation.* This had also resulted in the marginalization of the tribals right over the forest products. Thus, the tribals had no other option but to make themselves available as wage earners. The policy towards the forests has remained more or less the same even after independence [Joshi (1982)]. Further, the new forest policy aimed at afforestation with the use of fast growing species does not help the local populace or economy [DA (1983)].

There has been massive deforestation of these forests. The

possible explanations for deforestation may be industrialization, and increasing population. The former increases the demand for forest products and forest land and the latter increases the demand for food, to meet the same, more land may be brought under cultivation [Boserup (1965)]. Thus, the transition in the tribal social system may be because of industrialization or increasing population[10].

Industrialization has brought about a problem of adjustment among the tribals and they maintain a pluralistic or revivalistic ethical system *class for the city* and *caste for the village* [Ames (1969)]. Though industrialization has led to the emergence of new wants they still try to maintain their tribal identity [Kar(1981); Mital (1988)]. It has also been pointed out that the modernisation process leads to individualism and depletion of tribal values and cultures [Ramaiah (1988)].

Thus, in the process of integration certain old practices remain which limit their outlook. At the same time the tribals' integration into the market economy develops in them individualism. This explains the importance of old solidarities, that is, the prevalence of old institutions even in new situations.

There have been other instances where young entrepreneurs, trained by the government, have brought back new techniques and methods, which has given a scope for specialization and diversification. The diffusion of the above techniques have not come about because

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[10] The increasing population need not be the tribal population.

of the costs involved, however, whenever the tribals get an opportunity they have made use of it [Raza and Ahmad (1990:5)]. Such behaviour of the tribals explains their rationale after the monetization of the economy.

Another observation with regard to industrialization is that this has led to the displacement of the tribals from their lands [Vidyarthi (1970)]. This displacement was sometimes due to the advent of multipurpose projects. These projects displace more than one million people every year, most of whom are tribals [Baboo (1991)]. It has already been pointed out that the new use of forests have left the tribals with no other option but to take to wage labour. The workers work in a different environment, as a result of which, they are put in a situation of *social-vocational conflict* [Das Gupta (1982)]. Again, as they are unskilled they do not get permanent job, therefore, they are constantly on the move in search of jobs. This has been described as *industrial nomadism* [Vidyarthi (1970)].

It was also mentioned that deforestation could be because of extension of land under cultivation. There are many tribes who, because of population pressure are giving up shifting cultivation and taking to settled agriculture [Bose et al (1982); Nair (1987)]. In this step towards settled agriculture there is a constant move from the hills to the fertile plains in Assam [Goswami (1966)].

The forest policy and the infiltration of Nepalis, who cleared forests and took to cultivation forced the Lepchas, a semi-nomadic tribe, to take to settled cultivation [Bagchi (1982)]. There is a

trend among the semi-agriculturalist and pastoral nomads, of North West Himalayas, towards sedentarisation [Negi and Raha (1982)]. In another situation the sealing of the border with Tibet in 1962 had different impact on the Bhotias, traders by profession. The Bhotias of Pitorgarh took to agriculture (horticulture) [J C Das (1982)]. However, the Bhotias (also known as Jads) of Uttarkashi have reverted back to pastoralism [J Singh (1982)]. Further, Misra (1982) has shown how tribals have taken to wage labour when forest lands were converted to plantations.

Thus, it follows that there are various modes of production prevalent in the tribal communities [Pathy (1982)]. This has brought about differentiation within the tribes leading to class formation [Misra (1976); Pathy (1982)].

Another factor which brought a change is education. Its high association with jobs makes it an equalizing force [Dubey (1972:288); J Singh (1982:198) and Das (1982:214-15)]. In fact there is little difference in the standard of living of educated tribals and non-tribals [Mehta (1990)]. However, this has not helped in bringing about the desirable change because there are a large number of dropouts among Scheduled Casts and Scheduled Tribes [Mehta (1985)]. Further, Pattanayak (1981) questions the rationale of the system which imposes uniformity of learning and requires certification as a precondition to enter into *vocation and avocations of life.* Such a system promotes commodity based values in the interest of the few but at the expense of the many. The study concludes that this system offers very little in terms of economic development or cultural fulfilment or social betterment

for the tiribal community.

Now, let us clarify certain misconceptions about the tribal societies. It is widely believed and even assumed that the modern hunter-gatherer societies lived in isolation from food producing societies and that they did not practice cultivation, pastoralism or trade. However, this view is not true. Rather, such foraging groups were heavily dependent either on trade with food-producing populations and part time cultivation or pastoralism [Headland and Reid (1989); Mahapatra (1982a)]. It is further pointed out that "...this isolate model of the tribal culture, views the tribal culture as if they are separate from the others in time and space. This political use of anthropology (academics) maintains and reinforces a relationship between the dominant and dominated societies. This has been termed as *academic imperialism*" [Headland and Reid (1989:50) as quoted from Johannes Fabian's *Time and Other: How Anthropology makes its Object* (1963:164)].

Again, the transition from hunting and gathering to herding or cultivation is an evolutionary process. The Boserupian framework has much faith in the growth of population. Although the population factor is not to be undermined, it should be remembered that there are other factors as well. Then again there have ben certain instances when certain communities have gone back to the forests[11] and taken to hunting and gathering. Here they may also take to cultivation after clearing the forests [Layton, Foley and

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[11] Some of the reasons for going back to the forests could be drought or land alienation.

Williams (1991)].

Thus, it is seen that there are many forces impinging on the tribal societies. As a result of these forces some tribal societies have taken to settled cultivation. Again, there are other tribal societies which had taken to settled cultivation long back but, still are undergoing changes. To analyse the same an understanding of the exchange relationships or contractual arrangements in agriculture is called for.

1.3 Contractual Arrangements in Agriculture

One of the concerns of economists has been to explain various exchange relationships. In rural areas, which are predominantly agrarian, the understanding of agrarian relations and the contractual arrangements thereof arouse the interest of economists. Thus, a number of studies, both theoretical and empirical, have tried to look into the prevalence or emergence of various contractual arrangements such as interlocking of markets, permanent labour, fixed wage, piece rates, fixed rent, and share-cropping, to mention a few.

Implementablity[12] of these contractual arrangements depends upon the social environment[13]. The difference in the social environment is either because of differential accessibility to means of

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[12] A contract is implementable if no agent has the incentive to defect. The contract takes place because the agents involved expect to gain. The gain is ex-ante and not ex-post. If the contract is for a duration of time then the agents' mid-term evaluation depends upon the enforceability conditions.

[13] Social environment includes the characteristics and behaviour of the other agents with whom we interact.

production and the power of the dominant class [Bhaduri (1973, 1974, 1981, 1983); Bharadwaj (1974)] or because of differences in the agents behaviour to minimise transaction costs and avert risks and uncertainties [Bardhan (1979, 1980, 1983, 1989); Binswanger and Rosenzweig (1986); Eswaran and Kotwal (1985a, 1985b); Otsuka, Chuma and Hayami (1992);Otsuka and Hayami (1988)].

The former explanation can be put as neo-Marxian and the latter as neo-classical institutional economics. Without going into the ideological ramifications, we will discuss briefly, some studies on the contractual arrangements in an agrarian set-up.

In agricultural production, owners of different means of production such as land, labour and capital enter into a contract to produce. These contracts will differ depending upon the ownership structure of these means of production.[14] Thus, an agent who owns land and capital will enter into a contract with another who owns labour. But what is the nature of contract ? Is it permanent labour, fixed wage, piece rates, fixed rent or share-cropping ?

Cheung (1968, 1969) theorised on the existence of share-cropping, one of the main forms of tenancy, and contested the notion of share-cropping leading to inefficient allocation of resources. However, this failed to explain other forms of tenurial contracts. Eswaran and Kotwal (1985b) view that the dominant contractual arrangement depends upon the cropping pattern, the prevailing

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[14] A particular individual may have land and capital but no capital, another may have land and labour but no capital, someone else may have labour alone and so on.

technology and other social and economic constraints', whereas Otsuka, Chuma and Hayami (1992) ascribe this to the agents' attitude towards risk[15], in which share-cropping is a risk sharing contract between the landlord and the tiller.

Apart from tenancy, the land owner may cultivate directly by employing labourers. However, as there is an incentive on the part of the labourer to shirk, there is a need to monitor and supervise the execution of different contracts. This can be done by those who have a self-incentive to monitor, say, family members. It will not take place if there is a shortage of family members, or if the opportunity cost of family members is higher. A way out is to enter into a contract with another agent, who has the self-incentive to monitor. Tenancy is one and permanent labour (farm servants) is another. In the latter, a section of hired labour are given the incentive so as to transform themselves to family labourers [Eswaran and Kotwal (1985b)]. A section of hired labourers are given wages higher than their marginal product [Bardhan (1983)]. He adds that seasonality of work, leading to low demand for labour during slack seasons, forces the employer to keep a few permanent labourers. Thus, this brings about a differentiation between permanent labourers and casual labourers, with the former receiving a higher remuneration [Eswaran and Kotwal (1985a); Rao (1988)]. Such an arrangement saves the employer from search costs and assures him of at least some labour during the peak periods. At the same time, the permanent labourers have a greater employment security and stable income [Rao (1988)]. This

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[15] That is, whether they are risk-averse, risk-neutral or risk-takers.

has the implicit assumption that non-farm employment is not available.

Whether it is owner cultivation or tenancy during peak periods, some casual labourers are employed and the contract is on a fixed wage basis. However, this fixed wage need not be a time rate. it can also be piece-rates [Sarap (1991)].

Another important aspect in the understanding of rural areas is the interaction of the same agents in different markets. This leads to inter-locking of markets [Bardhan (1980); Bharadwaj (1974)]. In a situation where the land owner is also a moneylender and the labourer or tenant is also a borrower, then exploitation takes place not only due to ownership of land, but also through usury [Bhaduri (1973)]. He adds that this will add to stagnation, thus explaining the prevailing backwardness in agriculture in Eastern India during the seventies. This can also be explained by a higher unproductive investment vis-a-vis productive investment [Bhaduri (1981)].

The interest rates are both explicit and implicit. The implicit rate is captured in the under valuation of collateral or security by the lender [Bhaduri (1977, 1980); Rao (1980)]. The borrower's rationale lies in the nature of his subsistence [Scott (1976)]. Now if the borrower's subsistence depends upon the collateral, say land, then he would like to pay back the debts even if the interest rates are high. It is this *subsistence ethic* which forces the borrower to overvalue the collateral or security compared to the market rate. This will also hold for other assets for which the

borrower gives a higher value than land. Then, it follows that, whether the borrower defaults or pays back, the moneylender stands to gain [Basu (1984); Bhaduri (1977)]. If the borrower is a labourer and the moneylender a landowner, then this may lead to labour-tying arrangements [Bardhan (1983)].

Now, let us assume that the labourer owns land, but no capital or credit. We also assume that he is a subsistence farmer. For, simplification, we further assume that the amount of land he owns is such that he has no surplus labour time even during slack season. In this situation, to meet his cash requirements[16], he may borrow from the moneylender[17]. This may lead to inter-locking of usurer's capital with means of production (land) or the produce (foodgrains, say paddy). The former may lead to land alienation[18]. The latter would lead to an unequal exchange in the product market [Bhaduri (1974)].

The above mentioned theories, including neo-Marxian, are ex-post rationalisation of a specific situation. The neo-classical institutionalists fail to explain the origin of the institution or the emergence of a new arrangement. Similarly, neo-Marxians have failed to visualise certain forces of production. The problem lies in "the lack of specificity and historical richness needed for detailed understanding" [Arrow (1991:1)]. Keeping this limitation

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[16] He may also borrow goods for consumption and production purposes.

[17] It is immaterial for the analysis whether the money-lender is earning from other activities or not.

[18] This may be lucrative if the lender is a cultivator or landlord.

in mind we will develop an analytical framework to help us understand how social or economic status can get redefined.

Now, let us look into some empirical studies in the Indian context. Bliss and Stern (1982) conclude that almost all markets in Palanpur are well developed and tenancy is more or less one of share cropping. Their observation on share-cropping supports Cheung (1968, 1969). However, Palanpur is a village in western Uttar Pradesh which has witnessed the Green Revolution.

Contrary to this, there are some studies on West Bengal [Bardhan and Rudra (1978, 1981, 1986)]. They explain the interlocking of various markets, labour-tying arrangements, labour mobility and the like. In Orissa the various modes of exploitation through monetisation and subsequent commercialisation, have been explained by Bharadwaj and Das (1975). More recently, Sarap (1987, 1990a, 1990b, 1991), has shown the interlinkage of credit with labour and product with reference to Sambalpur. He adds that this interlinkage is a survival strategy as this is mostly carried out by small farmers and landless labourers. Further, Sarap (1991) also explains the dynamics in the labour market.

The above issues will serve as a starting point to help us analyse the economy of a tribal agrarian village. A deviation from the above studies is that we will also analyse the contractual arrangements at a historical time period during the pre-independence period. Further, we will compare the contractual arrangements prevailing at these two points of time. Though an analysis of the process will be more welcome, the temporal and

structural constraints will force us to a comparative-static analysis.

1.4 Objectives of the Study

The following are the objectives of the study:

(1) to analyse the exchange relationships in the tribal areas of Orissa in a historical perspective.

(2) to examine the contemporary exchange relationships in a tribal village between (a) cultivators and labourers, (b) cultivators and traders, and further investigate their impact on the agrarian scenario in general and the distribution of produce in particular.

(3) to find out how and why the exchange relationships get redefined, and

(4) to provide an analytical framework for explaining the possible ways by which social hierarchy get redefined.

1.5 The Study Region

The present study attempts to analyse how exchange relationships have been redefined in an agrarian[19] tribal economy. To analyse the same, in the first instance, Koraput, which was a part of the Vizagapatam Agency Tract under Madras Presidency before the formation of Orissa State[20], was chosen on two considerations. Firstly, the historico-specific experiences of this region would have been different; Secondly, there have been very few studies on Koraput by historians and virtually none by economic historians. This may be because of absence of information on these areas as

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[19] Here agrarian refers to settled cultivation. There may be some patches of slash and burn cultivation but this should not induce them to wander in search of new settlements.

[20] Orissa became a separate state on April 1, 1936.

they continued to be inaccessible regions for long.

In the second instance considerations of confining the study to an agrarian economy and in the process limiting it to a more smaller region led us to choose "the most fertile tract of the district...the Baunsadhara valley above Gunupur" [Bell (1945:2)]. It may also be mentioned here that the Gunupur region happens to be the abode of *Sōras*[21].

Then again, to analyse the contemporary exchange relationships a village was selected in the Ramnaguda block of Gunupur subdivision.

1.6 Field Survey and Sampling Design

As stated earlier, one of the objectives of the study is to look into the contractual arrangements between various agents in an agrarian economy. Therefore, we have selected an agrarian tribal village for a case study.

Further, to make the village more representative of the region, we kept in mind that the village chosen ought to be neither close to the Block headquarters nor the State Highway.

After the village was selected, a two stage sampling method was followed. In the first stage, we identified the population, which consists of 104 households. The population was stratified into 4 strata depending upon their (i) caste and (ii) behaviour as

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[21] The *Sōras* have been referred to in the literature as *Sar, Sabar, Sabara, Sabarai, Saora, Saur, Saura, Savar, Savara, Suari* and others. However, to guard against mispronunciation *Sōra* is technically most appropriate [India (1932:287)].

economic agents.

The four strata are Tribal farmers (tribals by caste and cultivators by profession), Tribal labourers (tribals by caste and labourers by profession, the social stratification within the tribals, being historical), *Dombas* (Harijans by caste and labourers by profession) and *Komatis* (a Telgu speaking trading community). Of the total 104 households, 37 are Tribal farmers, 30 Tribal labourers, 34 *Dombas* and 3 *Komatis*.

In the second stage of sampling, a sample size with probability proportion equal to population was drawn from each stratum except the *Komatis*. The probability of a particular household to be in the sample is 0.33. Thus, in the sample, we have 12 Tribal farmers, 10 Tribal labourers and 11 *Dombas*.

Then again, 2 households were drawn from the *Komati* households. The probability of a *Komati* household to be drawn is 0.67. In all the cases, we followed the systematic circular sampling method for each stratum.

Once the households were chosen, a schedule was canvassed and filled up for each household using the participatory observation method.

During the field survey, the nearby villages were also visited and the observation of the study village, regarding the interaction between various economic agents were also discussed with a couple of households. This was done so as to confirm whether our study

village was a representative village or not.

Here a question is likely to arise. If there are only 104 households then why not enumerate all the households ? This depends largely on the objectives in hand. Our objectives are to

(1) seek information regarding interactions among various agents leading to the distribution of paddy produced, and

(2) see whether the above distribution is iniquitous.

Though in any study, a complete enumeration would definitely give a better picture (in this case, the interactions between various agents), this does not, however, undermine the inferences arrived at, using sampling data. Moreover, sampling does serve the purpose of finding out the norm in the stratified population.

1.7 Chapterization Scheme

In Chapter Two an analytical framework will be developed to help us visualize how social hierarchy can be redefined. Chapter Three will give the salient features of the study region. The exchange relationships in the historical context are discussed in Chapter Four. Chapters Five and Six will elaborate on the exchange relationships in the study village. Whereas, Chapter Five will look into the dynamics of the labour market Chapter Six will discuss the role of the traders. The final chapter contains an analysis of how exchange relationships or contractual arrangements have been redefined.

Chapter 2

Social-Interaction and Outcomes: An Analytical Framework

2.1 Introduction

How does a gas/liquid particle behave? The answer is obvious **Random**. True, it is random but it is also continuous, that is, at a particular moment if it is at a particular position, P then in the next instance it has to be either at P or all possible positions surrounding P. To elaborate it if a particle moves from a position P_1 to P_2 then it must follow a path joining the two positions and it must have been in all points in the path in a successive way. Furthermore, if the particle is put inside a container its movement is confined within the container.

Analogously, put an individual or a group of individuals in a particular natural or social environment his/their behaviour will be confined by the natural and social boundaries. However, there is a basic difference between the behaviour of the gas/liquid particle and the individual. One may say that the former's behaviour is goalless but the latter's behaviour to a large extent is a struggle for survival compounded with a pursuit for a better tomorrow. In this pursuit men interact with nature and among themselves. In this process the nature of social interactions may get adapted or modified. As a result the hierarchy prevalent between individuals or group of individuals may get redefined.

2.2 The Analytical Framework

Let the individual or group be defined as a cultural entity[22]. Here, "Culture must be understood as including the whole of a more or less coherent ensemble of ideas, mechanisms, institutions and artifacts that — explicitly or implicitly — guide the behaviour of people belonging to a given group" [Martin (1992:326) as translated from Michael Leiris's *Cinq Etudes d'Ethnologie*]. Thus, each cultural group will have a set of characteristics.

Now, if there are two cultural groups (sets) C_{1s} and C_{2s}[23], who interact among themselves, with n_1 and n_2 characteristics (elements)[24] respectively. Then, one can represent each cultural set as:

$$C_{ks} = C_{ks}(C_{1k,ks}, C_{2k,ks}, \ldots, C_{nk,ks})$$

where k denotes groups, say 1 and 2
s denotes situations, say 1 and 2, and
n1 is not equal to n2.

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[22] A group in a micro sense may denote families and in a macro sense may denote countries. Further, the group need not be region or time specific. The identification of a group depends upon the objective in hand. However, if a group is identified then the members of the group will have some similar characteristics. Similarly, if two or more groups are identified then there will be certain characteristics to differentiate them. This analysis may also be extended to individuals.

[23] The analysis uses two cultural groups only for simplification and can be extended to K groups.

[24] Some elements may be more dynamic than others. This will differ from situation to situation.

In the first instance, for simplification, let us assume that (1) one cultural group has a higher Quality-of-Life than the other, say $C_{1s} > C_{2s}$[25] and (2) the social interaction among the two groups is in some sort of equilibrium.[26]

As mentioned earlier, the social interactions will modify or adapt to changing scenario. The changing scenario may be because of Governmental intervention, natural calamities[27], technological progress or innovation[28] which is imbibed in man's pursuit for a better tomorrow. These may bring about changes in $C_{1s}(.)$ and $C_{2s}(.)$ taking us to a new situation, say from s = 1 to s = 2. Thus, the possible outcomes are:

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[25] If the Quality-of-Life for both the group is very much identical in the first instance (apart from the measurement problem) then it may so happen that because of interaction one group may end up having a higher Quality-of-Life than the other. Hence, without the assumption one can also arrive at $C_{1s} > C_{2s}$ but at a new situation, say in the second stage.

It may also be mentioned that Quality-of-Life is taken only for illustration. One can make use of any other variable or socio-economic indicator but, all these may be subsumed under Quality-of-Life [Dasgupta and Weale (1992:119)].

[26] Equilibrium has been defined earlier in Section 1.1. The analysis will hold even if there is no such equilibrium to begin with.

[27] This can be of a short term nature like floods and famines and also of a long term nature like global warming or ozone layer depletion.

[28] To be more practical, innovation also includes adoption or diffusion of a particular technology.

Case P.1 Both $C_{12} > C_{11}$ and $C_{22} > C_{21}$.

Case P.2 Only $C_{12} > C_{11}$ but $C_{22} < C_{21}$.

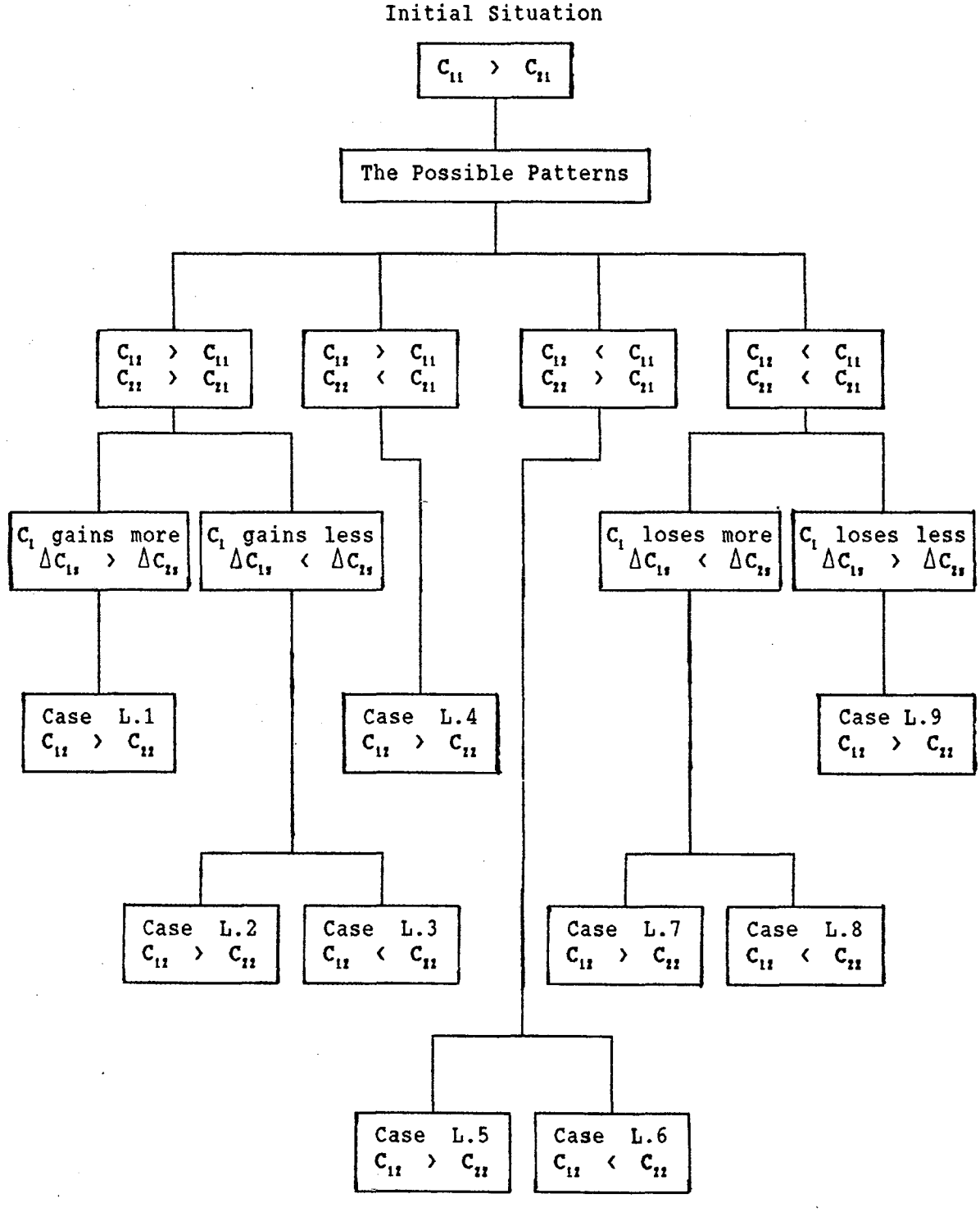
Case P.3 $C_{12} < C_{11}$ but $C_{22} > C_{21}$ and

Case P.4 Both $C_{12} < C_{11}$ and $C_{22} < C_{21}$.

While Case P.1 denotes that both are better off that of Case P.2 and Case P.3 denotes that one is better off but the other is worse off. Finally, Case P.4 denotes that both are worse off. It may be mentioned that in the above mentioned patterns, P.1 to P.4 the level for one group may change but it may not for the other.

The above outcomes explain the possible patterns for both the groups but not the level, that is the hierarchy or differences in the Quality-of-Life between the group in the new situation. This may be explained by Figure 2.1.

Figure 2.1 Changing Levels between two Interacting Populations.



Note: $\Delta C_{.2}$ denotes $(C_{.2} - C_{.1})$, that is, the difference in Quality-of-Life for any group. Thus the differences will be negative when $(C_{.2} < C_{.1})$.

Now, one can look into the details of the above nine cases.

Case L.1: Both are better off, $C_{12} > C_{22}$ but the differences widens $\Delta C_{i2} > \Delta C_{i1}$[29].

Case L.2: Both are better off, $C_{12} > C_{22}$ but the differences narrows $\Delta C_{i2} < \Delta C_{i1}$.

Case L.3: Both are better off, $C_{12} < C_{22}$ the hierarchy is reversed.

Case L.4: C_1 is better off but C_2 is worse off the differences widens $C_{12} > C_{22}$ and $\Delta C_{i2} > \Delta C_{i1}$.

Case L.5: C_1 is worse off but C_2 is better off the differences narrows $C_{12} > C_{22}$ and $\Delta C_{i2} < \Delta C_{i1}$.

Case L.6: C_1 is worse off but C_2 is better off the hierarchy is reversed $C_{12} < C_{22}$.

Case L.7: Both are worse off and differences are narrowed $C_{12} > C_{22}$ and $\Delta C_{i2} < \Delta C_{i1}$.

Case L.8: Both are worse off and hierarchy is reversed $C_{12} < C_{22}$.

Case L.9: Both are worse off but differences widens $C_{12} > C_{22}$ and $\Delta C_{i2} < \Delta C_{i1}$.

The above analysis shows that in six out of nine cases the group which was at a higher level in the first instance continues to remain at a higher level. Assuming that all cases have an equal probability then by simple mathematical induction one can tell that the probability of a group, which was at a higher level in the initial stage, to remain at a higher level in the successive stage is (2/3).[30]

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[29] $\Delta C_{i.}$ is not the same as $\Delta C_{.s}$. The former denotes the difference between the two groups in a given situation $(C_{1s} - C_{2s})$ whereas the latter gives the difference between the two situations for a particular group $(C_{i1} - C_{i2})$.

Their practical applicability depends upon whether the two groups/situations are comparable or not.

[30] Alternatively, if it is assumed that all the patterns (P.1 to P.4) have an equal probability of occurring then the probability will be (3/4).

However, the mathematical induction should not blind us to social reality, that is, in a given set-up the weightage may be higher for a particular outcome. It is more likely that C_1 may have a greater advantage because of superior knowledge, easy accessibility to information and the like. Again, in reality only one of the above mentioned outcomes will take place. Thus, if the event has already taken place then one may probe into the reasons for the same. Alternatively, if the event is yet to take place then to be aware of the probable outcome one should take into account the social/power structure, the relationships between the interlinked groups, the nature of changes, and other factors.[31]

Thus, there could be certain situations where both the interacting groups will be better off. However, this need not be the case always. It may so happen that only one of them is better off and the other is not. Further, both of them may become worse off. Again, some sections of the society who are at a higher level because of certain advantages are more likely to remain at a higher level in the successive periods because of the same advantages. However, this does not preclude the possibility of a group who are at a lower level to be at a higher level in the later periods.

Then again when two groups interact it may lead to the formation of new group(s). As per the analogy with the gas/liquid particle this may be explained as a situation where the interaction of two

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[31] It is known that if gas is heated it will move up. Thus, if one can know or identify with precision the forces acting upon their probable impacts then one can visualise the possible outcome(s) with greater accuracy. However, in real life the predictions may go wrong because of lack of knowledge and absence of or wrong information.

different particles may result in the formation of new substance(s).

2.3 A Policy Appraisal

There may be governmental and non-governmental interventions to improve the lot of C_2 and a success of the above effort under increasing production would lead to the possible outcomes of types L.1, L.2, and L.3 under P.1 but, if production does not increase then it would lead to a situation like L.5 and L.6 under P.3.

Further, if the above effort fails then the possible outcome is L.4 under P.2. Such an outcome may be because of improper monitoring and mid-term evaluation, and hence, precluding the possibility of continuous follow up action.

Furthermore, if the overall production falls then situations L.7, L.8 and L.9 are more likely however, a decline in production does not preclude the possibilities of P.2 and P.3.

2.4 Conclusion

To sum up one can say that the social interactions lead to various outcomes which may keep some group(s) better off and others worse off. Keeping the above framework in the backdrop the present study will analyse the exchange relationships prevalent in a tribal economy in a historical perspective and also in the contemporary period. Further, it will also be analysed how social relationships have been redefined to maintain or alter the social and economic hierarchy.

Chapter 3
The Salient Features of the Study Region

3.1 Introduction

This Chapter will give a background information about (i) the study region, that is, Koraput district of Orissa in general and Ramnaguda block of Gunupur subdivision in particular as also (ii) the tribals, particularly the *soras* of Gunupur.

3.2 Tribal Population in Orissa

There may be difficulties in defining a tribal yet Article 342 of the Fifth Schedule of the Constitution empowers the President to declare certain communities or part or group within certain communities as Scheduled Tribes [India (1962:1)]. Using the above criteria the 1991 census returns 8.08 per cent[32] as tribals, of which 10.38 per cent are in Orissa. The distribution of tribal population in Orissa is given in Table 3.1.

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[32] Excluding Jammu and Kashmir.

Table 3.1 Distribution of Tribal Population in Orissa, 1991.

District/State (1)	Percentage of Tribals to Total Population of the District/State (2)	Percentage of Tribals to Total Tribal Population of Orissa (3)
Balasore	7.07	2.82
Bolangir	18.55	4.50
Cuttack	3.30	2.59
Dhenkanal	12.18	3.31
Ganjam	9.40	4.22
Kalahandi	30.96	7.05
Keonjhar	44.52	8.46
Koraput	**54.31**	**23.27**
Mayurubhanj	57.87	15.51
Phulbani	37.32	4.58
Puri	3.55	1.81
Sambalpur	27.45	10.53
Sundargarh	50.74	11.35
Orissa	22.21	100.00

Source: Census of India, 1991.

A perusal of Table 3.1 shows that nearly 22 per cent of the total population of Orissa are tribals. They are largely concentrated in the districts of Keonjhar, Koraput, Mayurubhanj and Sundargarh. Further, nearly 60 per cent of the tribal population of Orissa are concentrated in these districts. As mentioned earlier the focus of this study is on the tribals of Koraput district in Orissa.

3.3 Relative Backwardness of Tribals, Koraput and Orissa

For a better understanding of tribals and Koraput district of Orissa an attempt is made to give the relative picture of tribals as against non-tribals and to provide certain socio-economic indicators about Koraput and Orissa.

It is generally believed that tribals are economically and socially

backward vis-a-vis non-tribals.[33] The differences in the literacy rates are given in Table 3.2.

Table 3.2 Literacy rate of Tribal and Non-Tribal Population of India, 1981.

Groups	Literacy Rates		
(1)	Males (2)	Females (3)	Total (4)
Tribals	24.48	8.00	16.32
Non-Tribals	48.73	26.01	37.84
All Groups	46.89	24.82	36.23

Source: 1) Census of India, 1981, Series I, Part II B(i), Primary Census Abstract, General Population, 1983.
2) Census of India, 1982, Series I, Part IV A(iv), SC/ST, Social and Cultural Tables, 1989.

The relative backwardness of the tribals may be explained by their low level of literacy.

It may be reiterated that the present study is confined to the Koraput district, and hence an overview of the same is called for. Koraput, with an area of 2702000 hectares, is the largest district of Orissa[34], constituting 17.39 per cent of its total geographical area. It is the southernmost district of Orissa. The exact location is shown in Map 3.1. Further, Table 3.3 also gives certain socio-economic indicators of Koraput.

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[33] However, it is difficult to provide evidences on various socio-economic indicators in order to arrive at a comparative picture.

[34] This refers to Koraput before October 2, 1992. The district was bifurcated into 4 districts for administrative efficiency on that date.

Table 3.3 Socio-economic Indicators of Koraput.

Socio-economic Indicators (1)	Figures for Koraput (2)	Figures for Orissa (3)	Rank of Koraput in Orissa# (4)
Percentage of Net irrigated area to Net area sown (1990-91).	17.21	32.16	12
Population per Bank in '000 (June 92).	19.9	15.2	13
Number of Post Offices per lakh of population (31.3.92).	22	25	10
Percentages of villages electrified (1991-92).	45.64	69.12	12
Population served per Medical Institution in '000 (1991-92).	16.6	21	11
Area covered per Medical Institution in sq. km. (1991-92).	149.0	102.4	12
Number of Medical beds per lakh lakh of population (1991-92(P)).	45	52	9
Number of High Schools per lakh of population (1991-92).	5	14	13

Note: 1) # Ranks are given keeping in mind that there are 13 districts in Orissa. At present there are 27 districts in Orissa after new districts were formed on October 2, 1992 and April 1, 1993.
2) (P) indicates figures are Provisional.

Source: *Economic Survey of Orissa, 1992-93*, Annexure 18.1, pp.210,212-213, 1993.

The above table shows that Koraput is one of the most backward districts of Orissa.

To arrive at a proper perspective an observation on Orissa is necessary. In Table 3.4 various socio-economic indicators of Orissa are given.

Table 3.4 Socio-economic Indicators of Orissa.

Socio-economic Indicators (1)		Figures for Orissa (2)	Figures for India (3)	Rank of Orissa In India# (4)
Percentage of Urban Population to Total Population (1991).		13.38	25.71	20
Percentage of Literacy (1991).		48.55	52.11	17
Percentage of Net Area Irrigated to Net Area Sown (1987-88).		28.1	31.6	12
Percentage of villages electrified (May 1992).		70	84	22
Per capita consumption of electricity in KWH, both utilities (1990-91).		200.5	241.5	14
Population per bank in '000 (June 1992).		15.2	14.0	18
Estimated Annual birth rate per 1000 population (1990).		30.0	30.2	17
Estimated Annual death rate per 1000 population (1990).		11.7	9.7	21
Percentage of villages connected with all-weather roads.		15	41	24
Per capita milk products in Kg. (1990-91).		14.9	63.7	21
Percentage of population below poverty line (1987-88).	Rural	48.3	33.4	25
	Urban	24.1	20.1	21
	Combined	44.7	29.9	25

Note: # indicates Orissa's position from among 25 states.
Source: *Economic Survey of Orissa, 1992-93*, Annexure 18.2, pp.214, 216-217, 223, 1993.

From Table 3.4 one can infer that Orissa is one of the most backward states in India.

Thus, it can be said that the present study is with regard to a deprived group of a backward region in a backward state of India.

3.4 Income Distribution in Gunupur

Now it may be recalled that the present study is mostly confined to the Gunupur region, a subdivision of Koraput[35] (see Map 3.2). To have an understanding of the economic set-up of Gunupur one may look into the income distribution of the region.

Table 3.5 Blockwise Distribution of Households and Total Income by Income group, Gunupur Sub-division.

Name of the Block	< 4000		4001-6000		6001-8500		8501-11000		All Classes	
	% of HH	% of Income	% of HH	% of Income	% of HH	% of Income	% of HH	% of Income	% of HH	% of Income
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Gunpur	45.84	21.18	30.16	34.85	17.51	29.33	6.50	14.63	100.00	100.00
Gudari	27.32	11.24	47.03	48.36	21.47	32.02	4.18	8.38	100.00	100.00
Padampur	36.21	14.44	27.80	27.71	24.32	35.15	11.67	22.70	100.00	100.00
Ramnaguda	**64.73**	**37.93**	**24.00**	**35.15**	**7.20**	**15.28**	**4.08**	**11.64**	**100.00**	**100.00**
B Cuttack	46.39	22.34	34.58	41.63	14.33	25.01	4.70	11.03	100.00	100.00
Muniguda	26.63	10.90	49.24	50.36	18.33	27.19	5.79	11.55	100.00	100.00
Chandrapur	46.05	22.21	34.86	42.03	15.09	26.38	3.99	9.38	100.00	100.00
Total	42.13	19.22	35.55	40.55	16.52	27.32	5.80	12.90	100.00	100.00

Note: 1) The Poverty line as defined in the Survey is at Rs.4000 per anum at constant prices.
2) The Total Income of the group has been calculated assuming Normal distribution in each Income Group.

Source: Below Poverty Line Household Survey, 1990-91, District Rural Development Agency, Koraput, 1992.

From Table 3.5 it can be deduced that nearly two-fifths of the households in Gunupur live below the poverty line. Secondly the income distribution is strikingly iniquitous and more so in the case of Ramnaguda. In Ramnaguda about 65 per cent of the households live below the poverty line. It so happens that the village surveyed is in the block of Ramnaguda. Hence, a little

[35] After the formation of new districts on October 2, 1992, Gunupur has become a sub-division of Rayagada district.

more information on Ramnaguda is called for.

3.5 The Ramnaguda Block[36]

The total population of Ramnaguda as per the 1991 census is 42,259 of which 64.69 per cent are Scheduled Tribes and 10.4 per cent are Scheduled castes. The total population in the 1981 census was 39,611 of which 66.14 per cent are Scheduled Tribes and 10.2 per cent, Scheduled Castes. Further, from a total of 17,692 main workers,1981, 39.53 per cent are Cultivators and 47.41 per cent are agricultural labourers. This shows that majority of the workers are dependent on agriculture for their livelihood.

The land use pattern given in Table 3.6 shows that the total geographical area of Ramnaguda is 34,635 hectares, which is 9.78 per cent of the total geographical area of Gunupur and 1.28 per cent of the total geographical area of the Koraput district. As is evident from Table 3.6, the proportion of cultivated area to total geographical area in Ramnaguda is higher than those of Gunupur sub-division, Koraput district or Orissa.

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[36] It is situated to the south-west portion of Gunupur sub-division. For an overview of the block see Map 3.3.

Table 3.6 Classification of land in Ramnaguda, Gunupur Koraput and Orissa:1985-86. (in hectares)

	Ramnaguda (1)	Gunupur (2)	Koraput (3)	Orissa (4)
Total Geographical Area	34635 (100.00)	354100 (100.00)	2702000 (100.00)	15540000 (100.00)
Total Cultivated area	16379 (47.29)	111160 (31.39)	828000 (30.64)	6546000 (42.12)
High	8461 (24.42)	62433 (17.63)	560000 (20.73)	2977000 (19.16)
Medium	6122 (17.68)	31980 (9.03)	182000 (6.74)	2055000 (13.22)
Low	1796 (5.19)	16747 (4.73)	86000 (3.18)	1514000 (9.74)
Net Area Sown	12036 (34.75)	78518 (22.17)	769000 (28.46)	6323000 (40.69)
Irrigated	1339 (3.80)	6504 (1.84)	89000 (3.29)	1925000 (12.39)
Non-irrigated	10697 (30.88)	72014 (20.34)	680000 (25.16)	4398000 (28.30)
Current fallow	4343 (12.54)	32642 (9.22)	59000 (2.18)	223000 (1.44)
Cultivable Wasteland	1752 (5.06)	31150 (8.80)	85000 (3.15)	403000 (2.59)
Forest land	8344 (24.09)	66103 (18.67)	1230000 (45.52)	5955000 (38.32)
Other fallow	1950 (5.63)	18338 (5.18)	73000 (2.70)	349000 (2.25)
Barren and Uncultivable	3550 (10.25)	47351 (13.37)	122000 (4.52)	367000 (2.36)
Others	2660 (7.68)	79998 (22.59)	364000 (13.47)	1920000 (12.36)

Note: Figures in the Parentheses indicate percentage to Total Geographical Area.
Source: 1) Orissa Agricultural Statistics: 1985-86.
2) Block Development Office, Ramnaguda.

Though, the total cultivated area as percentage of total geographical area is higher in Ramnaguda as compared to Orissa, it is not the case with regard to Net area sown, because in this region current fallow is high because of shifting cultivation, and hence, a larger share of the area comes under current fallow.

According to the census figures of 1981, 86.94 per cent of the main

worker s are dependent on agriculture. It shows that the major source of subsistence is agriculture.

In this context, we shall examine the nature and pattern of cropping in Ramnaguda. For this "Crop-wise and Source-wise crop achievement of Gunupur Agricultural District during Kharif 1991 and Rabi 1991-92" are used. The distribution of area for the two agricultural seasons of this region are given in Table 3.7 and Table 3.8 respectively.

Table 3.7 Crop-wise Area in Block as percent of Total Crop Area in Block for Kharif 91.

Name of the Block (1)	Paddy (2)	Ragi (3)	Maize (4)	G Nut (5)	Vege (6)	SCane (7)	Chilly (8)	Others (9)	Total (10)
Gunupur	85.67	3.97	3.58	1.04	4.55	0.65	0.54	-	100.00
Padampur	93.66	-	-	-	4.21	0.21	1.92	-	100.00
Ramnaguda	**93.72**	**0.86**	**0.12**	**0.39**	**3.16**	**0.80**	**0.96**	-	**100.00**
Gudari	97.30	-	0.20	-	1.78	0.61	0.10	-	100.00
Muniguda	58.61	18.09	6.93	0.74	6.52	0.33	1.35	8.04	100.00
B Cuttack	82.94	11.32	-	1.87	1.93	-	0.60	1.33	100.00
Chandrapur	67.68	10.06	11.59	1.52	6.71	-	2.44	-	100.00
Total	85.49	5.65	1.80	0.74	3.64	0.46	0.92	1.38	100.00

Source: Crop-wise and Source-wise crop Achievement for Kharif 1991 in Gunupur Agricultural District, District Agricultural Office, Gunupur, 1992.

The total crop achievement of Gunupur Agricltural District in Kharif 91 is 17,268 hectares, of which 85.49 per cent of the area is under paddy. In Ramnaguda, the crop achievement is 4,901 hectares (28.38 per cent of the crop achievement of Gunupur), of which 93.72 per cent is under paddy. Of the 4,901 hectares, 25.91 per cent is under Government Lift Irrigation, 1.27 under Private Lift Irrigation, 54.94 per cent under Minor Irrigation Project,

1.11 per cent under dug-wells and the rest 6.57 under Water Harvesting Scheme and the rest 10.2 per cent under natural sources.

Similarly, the crop achievement for Rabi 1991-92 in Gunupur Agricultural District is 3,947 hectares, of which 18.75 per cent is under paddy. The crop achievement in Ramnaguda is 1,345 hectares, which is 34.08 per cent of the crop achievement for Gunupur. The source-wise distribution of irrigation in Ramnaguda are 44.39 per cent under Government Lift Irrigation, 3.49 per cent under Private Lift Irrigation, 10.26 per cent under Minor Irrigation Project, 2.01 per cent under dug-wells, 0.37 percent under Water Harvesting Scheme and the rest 39.48 per cent from natural sources.

Table 3.8 Crop-wise Area in Block as Percentage of Total Crop Area in Block for Rabi 1991-92.

Name of the Block (1)	Paddy (2)	Maize (3)	Ragi (4)	Onion (5)	Veg (6)	Chil (7)	SCane (8)	GNut (9)	Til (10)	BGra (11)	Other (12)	Total (13)
Gunupur	19.77	6.38	5.88	6.38	13.39	15.64	5.63	5.88	2.25	8.51	10.26	100
Padampur	12.26	6.90	-	1.92	11.49	5.36	2.30	3.07	25.29	22.99	8.43	100
Ramnaguda	**14.50**	**1.04**	**1.86**	**5.95**	**16.06**	**14.87**	**3.72**	**1.78**	**15.09**	**15.84**	**9.29**	**100**
Gudari	37.66	4.94	7.01	2.08	13.77	6.75	3.38	11.17	3.90	2.60	6.75	100
Muniguda	16.94	4.44	0.81	3.63	23.39	19.35	-	8.06	-	2.82	20.56	100
B Cuttack	19.08	2.61	1.18	4.15	47.87	11.37	0.47	5.92	-	-	7.35	100
Chandrapur	10.77	23.08	13.85	3.08	12.31	4.62	-	18.46	-	-	13.85	100
Total	18.75	3.80	3.04	4.81	22.19	12.97	2.99	5.17	7.65	9.07	9.55	100

Source: Crop-wise and Source-wise crop Achievement for Rabi 1991-92 in Gunupur Agricultural District, District Agricultural Office, Gunupur, 1992.

The crop achievement shows that paddy is the major crop. It covers 93.72 per cent and 14.5 per cent of the area in Kharif and Rabi cultivation respectively.

Thus from the above analysis, it is clear that (i) majority of the people depend upon agriculture for their livelihood, (ii) a large area of the Total Geographical area is under cultivation (iii) as the proportion of area under Rabi is very less it can be said that a larger portion of this area is under paddy cultivation. Thus, paddy should be a major factor determining the income of the people.

This raises a question. Is there any relationship between paddy, a major determinant of income, and the inequitable income distribution in this region ?

To analyse this in detail we take up a micro study of a village in this region.

3.6 The *Sōras*

The Gunupur region particularly the Blocks of Gunupur, Gudari, Padampur and Ramnaguda are largely populated by the *sōras*. Hence, an overview on *sōras* is called for.

The *Sōras*, a branch of Mundari speaking tribe of the Austro-Asiatic languages [Bell (1945:58)], have been fairly well known for over two thousand years. *Varaha Mihira*, Pliny and Ptolemy mentioned about them. The name also occurs in the *Amarakosa*, *Brhatsmita*, *Katha-sarit-sagar*, *Ramayana*, and *Mahabharata*, among others [Bell (1945:69; Oppert (1893:83)].

Further, Ptolemy identifies their place of dwelling in a South-westerly direction from the Gangetic delta at a distance from the

sea [Bell (1945:69)]. According to Hunter (1877:238) their abode was the mountain ranges which runs parallel to the coast from the Chilka lake to the Godavari river. More recently Bell (1945:69) mentioned that the aboriginal *soras* still survive in the Gunupur region of Koraput district and the neighbouring Parlakhemdi region of Ganjam district.

Another interesting aspect is that the very origin of *Lord Jagannath*[37] may be traced back to the *sōras* [Hunter (1980:8); Mohanty (1990:357); Oppert (1893:54)], the original inhabitants of Orissa [Hunter (1980:9); Oppert (1893:38)]. This process has been explained as Aryanisation of the tribal god [Mohanty (1990:357); Parija (1989)].

Then again there is a differentiation within the *sōras*. They may be divided into the *lamba lanjias* (long tailed)[38] and *sudha* (pure)/*kapu sōras*. The abode of the former is the *Puttasingi* hills to the north-east of Gunupur [Bell (1945:5)] but the latter are found in the plains of the Baunsadhara valley [Bell (1945:70)].

The village surveyed for the present study is a settlement of the *sudha soras*. For a location of the village see Map 3.3.

3.7 Conclusion

From the total population of Orissa nearly twenty-two per cent are

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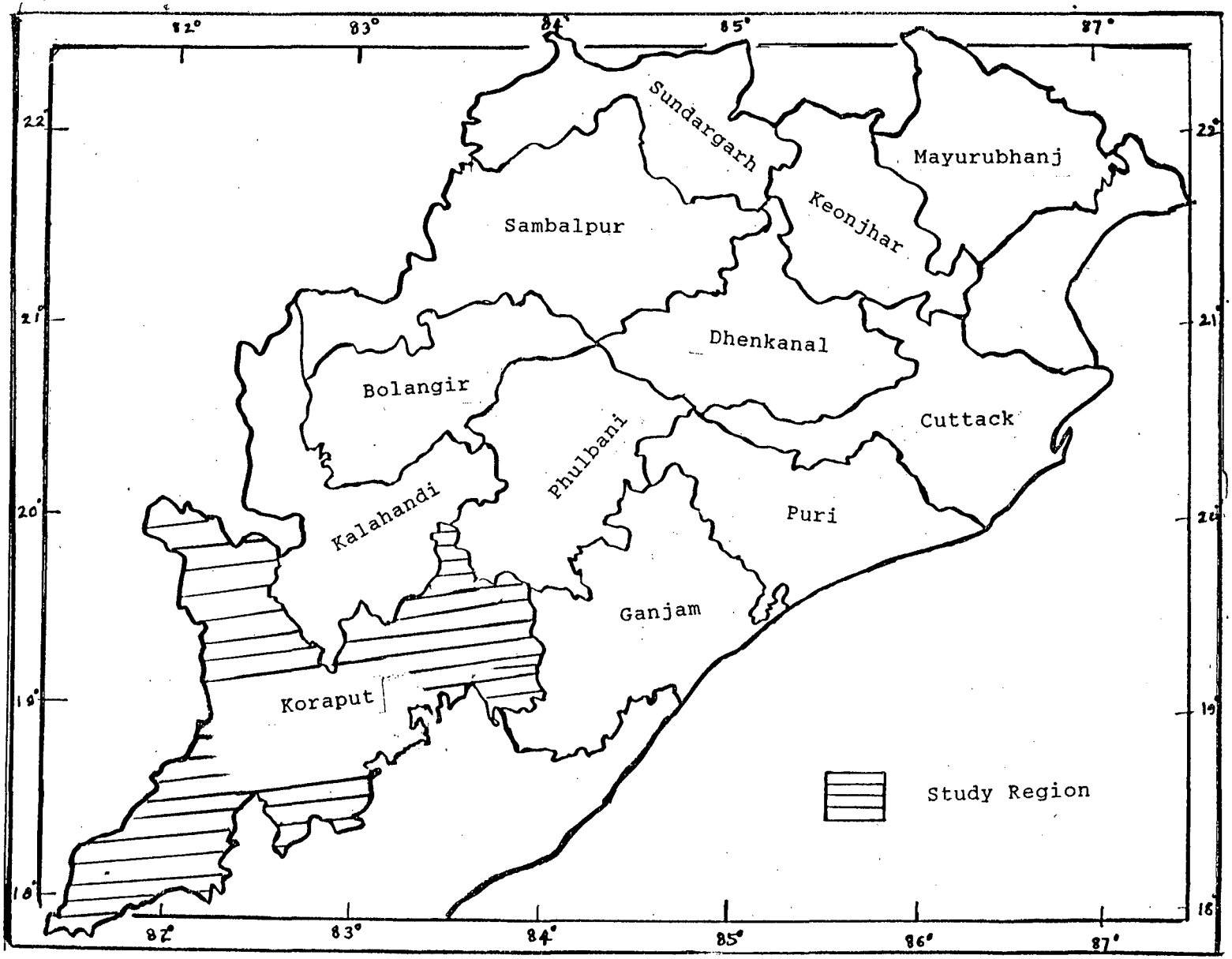
[37] Orissa is more popularly known as the land of *Lord Jagannath*.

[38] They are called as such because "they wear round their toins a cloth with coloured tasselled ends hanging in front and behind" [Bell (1945:70)].

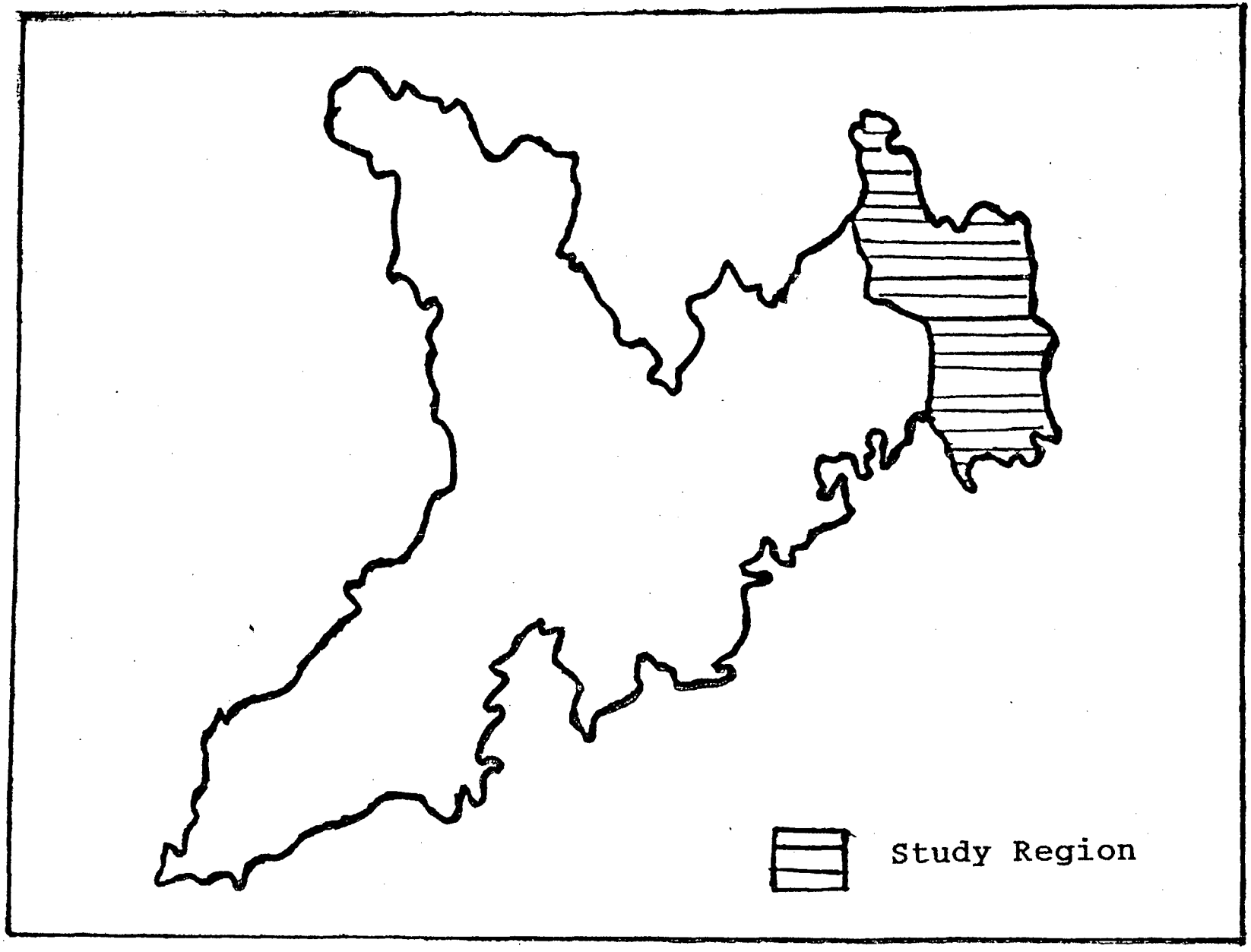
tribals, of which around 23 per cent are in Koraput. The focus of this study is on the tribals (a deprived group) of Koraput a backward district in Orissa, which itself is one of the most backward states of India. Again, the present study is mostly confined to the Gunupur region, the abode of *soras*. In Gunupur the village surveyed happens to be from Ramnaguda block. The observations on Ramnaguda shows that the income distribution is strikingly iniquitous and majority of the people depend upon agriculture for their livelihood. In light of this, the impact of exchange relations on the nature and distribution of the produce in the village surveyed will be looked into.

Map 3.1 The Administrative Map of Orissa.



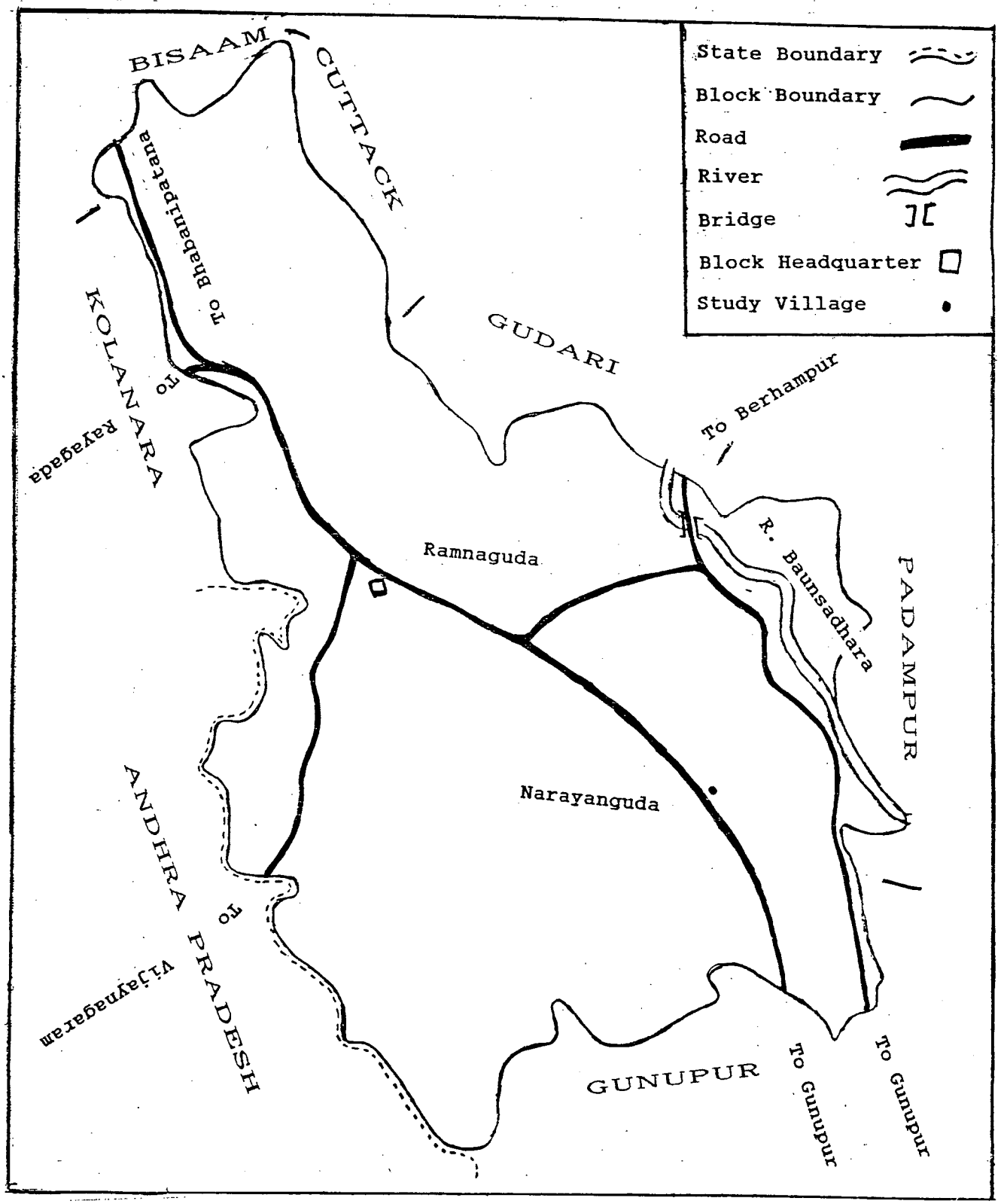
Note: New Districts were formed on October 2, 1992 and again on April 1, 1993. At present there are 27 districts in Orissa. The above map refers to Orissa before October 2, 1992.

Map 3.2 : The Gunupur Sub-division of Koraput.



Note: At present Gunupur is a sub-division of Rayagada District.

Map 3.3 The Block Map of Ramnaguda.



Note: Ramnaguda is situated in South-west corner of Gunupur sub-division.

Chapter 4
Exchange Relationships in a Historical Perspective

4.1 Introduction

As has been stated earlier, the nature of exchange in an economy would influence the distribution of the agricultural produce. These exchange relationships may differ across time and space. An analysis of this may explain how exchange relationships get redefined. The focus of the present chapter is to look into the exchange relationships in Koraput District in general and its Gunupur Division in particular in a historical perspective.

4.2 The Grain Drain

The Baunsadhara valley in and around Gunupur has the most fertile tract of the district [Bell (1945:2)[39]; Francis (1915:257)[40]. In fact the average revenue, for the Fasli year 1207-1209 (1797-98 to 1799-1800), of the Jeypore Zamidari was 58,397 rupees of which 15,000 rupees (which is 25.69 per cent of the revenue) was from Gunupur[41] [Carmichael (1869:287)[42] cited from the Report on the

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[39] Bell (1945) refers to "Orissa District Gazetteers: Koraput" by R C S Bell.

[40] Francis (1915) refers to "Gazetteer of the Vizagapatam District" by W Francis.

[41] Approximately, this comprises of the Blocks of Gudari, Gunupur, Padampur and Ramnaguda of the present day Gunupur Sub-division. These blocks are in the southern part of the sub-division.

[42] Carmichael (1869) refers to "A Manual of the District of Vizagapatam in the Presidency of Madras" compiled and edited by D F Carmichael.

Permanent Settlement of Jeypore, dated April 20, 1803].

The rice grown in this region was popular even in distant Bengal [Bell (1945:162-163); Francis (1915:103)]. However, much of its transit took place through Parlakhimdi [Francis (1915:257)]. This was facilitated by the extension of the Naupada-Parlakhimdi light railway line to Gunupur in 1931 [Bell (1945:131)]. On account of this in the year 1938-39 the quantity of rice exported from the Gunupur station was as high as 67,789 maunds [Bell (1945:122-123)]. Thus, it can be deduced that a large quantity of rice was going out from this region.

4.3 The Composition of Trade

Besides paddy other commodities were also exported from this region and in return certain items were imported from the plains (see Table 4.1). It is necessary to mention here that the weekly markets or *hats* take a prominent place in the exchange of the hill produce and the produce of the plains. The forest dwellers sell the produce of the forests in these markets and buy the commodities of the plains offered by the *Komatis*. The *Komatis* in turn buy the hill produce and sell it in the plains. The composition of trade between the hills and the plains is given in Table 4.1.

Table 4.1 Composition of Trade of Koraput District.

	c. 1869	c.1915	c.1945
Exports			
1	iron	-	-
2	rice and ragi	grain (paddy and rice, ragi, cholam, and red, green and black gram)	grain (paddy and rice, ragi, cholam, and red, green and black gram)
3	alsi (niger)	oil seeds: niger, gingely and mustard	oil seeds: niger, gingely & mustard
4	sticklac and dammar	dammar and lac	dammar and lac
5	horns	horns, hides & skins	horns, hides & skins
6	bees-wax and honey	honey and wax	honey and wax
7	hill brooms	-	-
8	arrowroot	arrowroot	arrowroot
9	ginger	ginger	ginger
10	garlic	garlic	garlic
11	tamarind	tamarind	tamarind
12	-	long pepper'	long pepper'
13	-	-	turmeric
14	soapnuts	soap-nut	soap-nut
15	marknuts	marking-nut	marking nut
16	gallnuts	-	-
17	sweet oranges, guavas jackfruit, mangoes & plantains (coarse kind)	-	-
18	hill bringle	-	-
19	a variety of drugs and dyes	kamela powder and other dyes	-
20	-	myrobalans and other tanning barks	myrobalans and other tanning barks
21	-	-	tobacco
22	-	-	timber and bamboos
23	-	-	sugar
Imports			
1	salt	salt	salt
2	salt-fish	salt-fish	salt-fish
3	cloth	cotton twists and piece goods	cotton twists and piece goods
4	tobacco & opium	tobacco	-
5	vegetables	chillies and onion	chillies and onion
6	spices & coconuts	coconuts	coconuts
7	sugar	jaggery	jaggery & sugar-cane
8	-	kerosene	kerosene
9	glass bangles	beads, bangles and coral	beads, bangles and coral
10	-	metals and metal utensils	metals and metal utensils
11	-	jewellery	jewellery

Source: 1) Bell (1945), pp.122-123.
2) Carmichael (1869), pp.110,157-158.
3) Francis (1915), p.130.

The composition of trade portrays that the items exported are more in number than the items imported.

Now, let us explain some of the changes in the composition of trade as observed in the above table.

Firstly, Koraput which was an exporter of iron during c.1869 had stopped the exports by c.1915. This could be because of replacement of the Koraput iron by imported iron or iron produced at the Tata Iron and Steel Company, which started producing pig iron in 1911.[43]

As against this Koraput had started exporting sugar, timber and

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[41] This may be corroborated by the imports of iron and steel to Vizagapatam. However, as figures for Vizagapatam are not available, we give the rail-borne import figures for Vizagapatam and Ganjam and the sea-borne trade for the Madras Presidency.

Table 4.2 Imports of iron and steel to Vizagapatam,1911-1921.

(Qty. in tons)

Year (1)	Imports of Iron and Steel into Madras Presidency by sea (2)	Imports of Iron and Steel into Vizagapatam and Ganjam by rail (3)
1910-11	50994	
1911-12	50844	
1912-13	51324	
1913-14	90983	
1914-15	40427	212
1915-16	38285	274
1916-17	30641	328
1917-18	13740	322
1918-19	11414	
1919-20	20804	
1920-21	51250	

Note: The declining imports by sea may be because of World War I.
Source: 1) Review of the Rail and River Borne Trade of the Madras Presidency, Various Issues.
2) Review of the Sea-borne Trade of the Madras Presidency, Various Issues.

bamboo by c.1945. Export of sugar may be explained by the opening up of the sugar factory at Rayagada in 1937. It may be mentioned here that the Raipur-Vizianagaram railway line passing through Rayagada started functioning in 1932 [Bell (1945:131)]. The rail-borne trade for the year 1937-38 shows that 74,586 maunds of sugarcane were imported to Rayagada from outside the district and 30,000 maunds from within the district. Further, the amount of sugar exported outside the district was to the order of 21,294 maunds [Bell (1945:122-123)].

Similarly, much of the timber exported was meant for sleepers for the railways [Bell (1945:103)]. Another reason for the export of timber as well as bamboos could be for the construction of buildings in the towns. Further timber is a major source of revenue for the Government. The contract on timber from the forests of Koraput during the late thirties and early forties earned an yearly revenue of 110,000 rupees [Bell (1945:103)].

It may also be seen that certain items like metals and metal utensils and jewellery had entered the import basket by c.1915. This implies that there existed a section of the population with a higher standard of living who had a demand for the above. Who were these people? They could have either evolved from within the region or migrated from the plains or both. In the absence of direct evidences we take the help of some indirect evidence to find out who these people could have been.

Firstly, if the demand for the above commodities had increased because of people coming from the plains and settling in the

district, then the inflow of net in migration might have caused an increase in population. We give figures on the growth of population in Table 4.3.

Table 4.3 Population growth of Koraput, 1901-1911.

Year (1)	Population figures of Koraput (2)	Decennial growth rate for Koraput (3)	Population figures of Orissa (4)	Decennial growth rate for Orissa (5)
1901	722,792	-	10,302,917	-
1911	868,955	20.22	11,378,875	10.44

Source: Census of India

The above table shows that in a span of ten years the population of Koraput increased by 146,156 showing a decennial growth rate of 20.22 per cent as against 10.44 per cent for the whole of Orissa. Thus, the high growth of population in Koraput may be ascribed partly to immigration.

This may be corroborated by the fact that the region became more accessible due to improved communications. The construction of roads started after the region was first visited by the Government officers in 1863 [Carmichael (1869:245-246)]. The road into this region had been constructed during the late 18th and early 19th century [Francis (1915:141-142)].

The main idea behind the opening up of communication facilities had been to tap the rich produce of the region [Francis (1915:137,145)]. This also attracted the people from the plains,

especially the traders[44] (in this case the *Komatis*).

In the earlier days the *Komatis* would have come to the *hats* in the foothills to purchase the hill produce or sell the produce of the plains. However, with improved communication they would have entered the interior regions and then settled down. In this process they would have acquired land.

Perhaps, this would have led to land alienation of the original cultivators and indeed this had happened. The Madras Presidency "Agency Tract Interest and Land Transfer Act, 1917." which was applicable to this region stands testimony not only to widespread land alienation but land alienation through usury. In fact the best paddy land of the *Sōras* had passed into the hands of the *Sahukars*[45] before the Act of 1917 made such transfers illegal [Bell (1945:70)].

Now, if there was a section of the society whose income had increased and if this income was more than they could consume then they had to store it in a form which they could use later. Thus gold and jewellery become a necessary selection. The demand for

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[44] There could be others such as administrators, agriculturalists in search of cultivable land who might have migrated into this region.

[45] *Sahukar* is an Oriya word which literally means money-lender. He lends money to the *raiyat* during the time of the latters' need. Again, because of the relationship between usury and land alienation these *sahukars* were also rich land lords. In this region (Gunupur) they are mostly *Komatis*. However, others such as *Sundhis* and *Brahmins* have also acquired this status elsewhere in the district.

Here *raiyat* refers to the farmer or peasant. In this region they are basically tribals. However, for generalization we will be using the word *raiyat* as much of the analysis will also hold for the non-tribal farmers of the district.

jewellery by a particular section of the society may be explained by the fact that "outside the bigger towns, the women of money lending *Komatis* are almost the only ones who have gold ornaments of value" [Francis (1915:108)].

Thus, we can say with greater certainty that by about 1915 most of the demand for metals and metal utensils and more particularly jewellery was because of the people who could have migrated into this region.

Though the composition of trade had remained more or less the same, it will not be a misnomer to say that improved communication had facilitated the growth of commerce and influx of people, especially traders, from the plains. This ushered in particular type of exchange relationships between the traders from the plains who settled down and acquired property rights over cultivable land and the *raiyats*.

4.4 Indebtedness, Land alienation and Bondage[46]

The process of land alienation was the outcome of interaction between the existing social system and the larger processes of political and economic development. Now, we mention certain characteristics of the social system which may explain the above mentioned process.

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[46] Most of the analysis in this section and Appendix 4A have been deduced from two Oriya novels Mohanty (1946, Vidyapuri edition 1983) and Mohanty (1949, Reprint 1987). Hereafter Mohanty (1946) and Mohanty (1949) respectively. These novels were written on the tribals of Koraput.

One explanation lies in *podu* or shifting cultivation, which is widely prevalent in this region. The process of *podu* cultivation is as such: first a patch of land is cleared of the forest growth, after which it is burnt and then cultivated for some years and then the land is left fallow for some period of time presumably to be cleared and cultivated again.

This has two dimensions. Firstly, according to this system the tribals had no property rights over the lands. Thus, during the period in which they are left fallow they can be acquired by the new settlers [Mohanty (1949:55)]; Secondly, *podu* cultivation or more particularly the felling of trees was prohibited by law[47] [Bell (1945:101,104); Mohanty (1949:335-338)]. Violators of the above law were prosecuted having to either serve a sentence or pay a fine [Mohanty (1946:24,27)].

There were other laws such as prohibition on the private production of indigenous liquor or consumption of this illegally produced liquor. Violators of these laws were also penalized on similar lines as above [Bell (1945:86); Mohanty (1946:79-80)]. Prohibition on the production of liquor forced the *raiyat* to depend completely on the authorised dealers, basically *sundhis* for drinks. These dealers allowed the *raiyats* to drink on credit and then to recover their debts acquired the property rights over the lands of the *raiyats*.

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[47] The Madras Forest Act of 1882 was extended to this region in 1891 and reservation of forests started in 1900.

The revenue earning considerations of the government guided the above policies. Though *podu* cultivation was illegal the estate[48] could exploit the forest resources. We had mentioned the amount of revenue earned by timber contracts. During the same period the yearly average revenue from the forests was 4 lakh rupees approximately [Bell (1945:103)]. Similarly, the ban on the production of indigenous liquor was not guided by any ethical reasons. It was more to preempt the competition for government manufactured liquor. This is borne out by the fact that the government commands the monopoly in the production of this liquor [Bell (1945:86)]. Thus, the violator is penalized because "when the forest cover is cleared the *Raja's* valuable woods are lost, when arrack is prepared the Government stores' liquor sale falls" [Mohanty (1946:22)].

It was mentioned above that violators of laws could be asked to make a payment. To fulfil the payment, the *raiyat* needs money. If he had no money then one of the options he had was to sell his produce to the trader. Again, if there was no produce to sell he could go to the moneylender and borrow. If the moneylender asks the debtor to pay back in grains which he would produce then this situation is analogous to where the *raiyat* goes to the trader and enters into forward trading of the grain at a price determined by the trader. This is so because these professional moneylenders were also petty merchants who took payments in grain or any other

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[48] It may be mentioned here that a dual administration existed in Jeypore (Koraput). The magistral power were in the hands of the Madras Government. However, the revenue matters were in the hands of the *Raja* [Bal (1880, Reprint 1985:603-604)].

produce as the case may be [India (1930:30-31)][49].

Now, if there was a crop failure or because of the high interest rate charged [Francis (1915:109); Mohanty (1946:103-104)] the *raiyat* was not only unable to pay the existing debts but, was also forced to borrow for consumption and production[50] purposes or in the first instance the amount to be borrowed was so high that the money-lender would not sanction the loan against the produce to be harvested then the *raiyat* had to pledge either his labour services or land or other assets.

A borrower without land or any other assets could borrow only by pledging his labour services. Again a *raiyats'* family with two or more working members could borrow money by pledging the labour services of some of the members. In yet another situation the *raiyats* family would either pledge all the labour services or all the land, particularly when there is only one working member in the family.

A man whose labour services are pledged becomes a *goti*. *Goti* as a mode of debt repayment, was very much a part of the existing social system. Further, the *goti* was from among the community and he was treated as an equal, and hence, the work done by the *goti* was what was expected from any other man as decided by the social norm [Bell (1945:116)].

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[49] India (1930) refers to "The Madras Provincial Banking Enquiry Committee: Report" of 1930.

[50] There could be other situations when a person borrows for consumption and production purposes.

However, things became different when the *sahukar* came into the picture. His motives were guided by principles of maximizing wealth [Mohanty (1946:241)], and hence, he extracted as much as he could from the *goti*. As mentioned earlier, these *sahukars* had migrated from the plains. Thus, there was neither any economic rationale nor any social backing to consider the *goti* as an equal [Mohanty (1946:375)]. More over, the debt accounts of the *goti* were manipulated so as to keep him perpetually indebted, and hence, under bondage. Further, if the debtor died without repaying the debts then the debt was carried over to the next generation [Bell (1945:117); Francis (1915:109); Mohanty (1946:221)].

If the borrower had no land or other assets then he might remain perpetually indebted in the absence of any other alternative, but, why should a borrower who had land remain as a *goti* forever. It may be mentioned here that all those who become *gotis* did not remain so forever, some of them might have paid off their debts. Further, it may be such that most of those who paid off their debts had land. They might have sold or mortgaged the land, preferably to the *sahukar* to pay off their debts [Mohanty (1946:246)]. Then again, there could have been others who would have mortgaged their land instead of pledging their labour services from the very beginning. Whatever it may be, in the process of paying off their debts the *raiyats* got separated from their land. Thus, the option they had was either to take to *podu* cultivation or make themselves available as *gotis* [Bell (1945:117)].

In another situation those who pledged their labour services could not work in their own fields and hence could not pay the land

revenue. If they could not pay the land revenue then they would lose the cultivable rights over the land to another *raiyat*, preferably one who could pay the revenue [Mohanty (1946:209)]. At this juncture the *raiyat* may think of either selling or mortgaging the land.

As the *raiyats'* subsistence depends upon this land he overvalues it [Mohanty (1946:220,241)] and would not like to part with it. Hence, he would prefer to mortgage rather than sell it. On the other hand the *sahukar* undervalues the land [Mohanty (1946:221, 245)]. As the *sahukar* has a higher bargaining power, the contract takes place at a price much below the market value. The *raiyat* accepts this as he thinks it to be better than the earlier situation because if land is mortgaged then his debts would be redeemed much earlier. The price differentials will not only give the *sahukar* a high rate of return but also ensure that the *raiyat* would work sincerely to repay the debts. And what finally happens is that the *raiyat* remains a *goti* forever and loses his land as well [Bell (1945:117-118); Francis (1915:109); Mohanty (1946:241)].

Thus, the above analysis shows how the *sahukar* acquires property rights over land and also ensures a steady flow of labour in the form of *goti*. The advantage of the *goti* system as against the wage system, for the *sahukar* is that the *sahukar* can extract as much work as he wants and the *goti* is supposed to do whatever the *sahukar* wants him to do [Mohanty (1943:198)]. This is a crude form of time rate contract where the nature of work is not defined. This is so, as the *goti* is indebted and works to redeem his debts.

This does not mean that the income of the *sahukar* is limited only by his ownership over land, labour and other assets. He may get a part of the produce, from the land which is not under his ownership, through debt repayments. Further, the *raiyat* may bring a part of the produce to sell in the *hat* and in exchange buy and take salt, tobacco, cloths or other items of consumption or he may take back money. In either case the produce comes to the ownership of the *sahukar.* Further, the *sahukar* introduces new crops and invests on milch cattle, which gives him milk and milk products as well as manure [Mohanty (1946:287-289,328-329)]. However, productive investment might have been constrained by higher rate of return from unproductive investment.

Apart from this the *sahukar* also enters into a contract with the *raiyat* called *gadam.* *Gadam* is a forward trading contract which takes place much before the harvest and at a price which is much below the expected post harvest price [Mohanty (1949:447,461)]. *Gadam* is the *sahukars* boon but the *raiyats* bane as this leads to the latters' indebtedness.

As it is, the *raiyats* money income is less than what his income has been the previous year. And again, by the time of harvest a part of the money earned by *gadam* would have been spent. Thus, the *raiyat* may fall short of money required for the festivals and celebrations which follow the harvest, as is the custom in all agricultural societies. He may ward off the short fall by selling a part of the produce which was kept for consumption purposes. If he does not plan his consumption accordingly then he may end up borrowing for consumption purposes too.

In this situation he may end up with a forward trading contract for the produce. However, this is not the same as *gadam*. *Gadam* is a transaction between a seller and a buyer whereas borrowing is a transaction between a borrower and a lender. Though, the *raiyat* is the seller as well as the borrower and the *sahukar* is the buyer and the lender and in both the cases the contract is a forward trading of the unharvested produce, yet the basic difference is that the *sahukar* has a higher bargaining power in case of borrowing.

Further, among those *raiyats* who cultivated their land themselves, a system of labour exchange contract existed. According to the above contract a particular *raiyat* could go and work for another and the latter in turn pays back by working for the former. This not only facilitated labour payment in a pre-monetized economy but also ensured a steady supply of labour to accomplish work which required rapidity [Mohanty (1946:258). Though this system existed with the expansion of the *sahukars'* operation, it was on the wane.

As a result of the above process the tribals' struggle for existence became more acute, their life expectancy was going down and their status in the society was reduced to that of serfdom [Sahu (1942:21-23)]. Further, Sahu (1942:20) added that much has to be done in the development front to save the aboriginal from the onslaught of the *Banias* and *Komatis*.

It is in this context that the *raiyat* may depend on the *dombas* who act as intermediaries. The role of the *dombas* has been analysed in Appendix 4A.

4.5 Conclusion

The above analysis shows that the penetration of British interests into the tribal region facilitated the drain of wealth in general and grain drain in particular. Further, the developmental work and Governmental policies also led to the emergence of a class called *sahukars*. The mode of operation of the *sahukars* led to interlocking of credit and factor markets, especially land and labour, thus, ushering in a process of land alienation and bondage. Though we cannot say that production was stagnant[51] yet much of the investment by the *sahukar* was unproductive or rent seeking.

[51] It may be mentioned here that the mode of production was not that of share-cropping and there was no way that an increase in production would have been passed on to the tenant.

Appendix 4A

A Note on *Dombas*

Among the hill tribes reside the Dombas, who have a strong aversion for work [Bell (1945:80); Mohanty (1949:30)]. However, they made a living from commission they received by putting through transactions on behalf of others. This was so because the tribal does not know any other language, particularly other tribal languages, and the *domba* trades on this [Bell (1945:79-80)]. Apart from this they also earned a livelihood by weaving [Bell (1945:120)] and worked in the fields of the *raiyats*. In such a situation the payment may be in kind or even in terms of liquor [Mohanty (1943:51)].

Further, as per social norm the *dombas* can be drummers or village watchman. Their occupation as watchman is much to do with their aptitude for theft which inculcates in them some proficiency in its detection [Bell (1945:79)]. Therefore, whenever cattle is lost or produce is stolen from the fields, the first suspect, in fact the only suspect, is the *domba* [Mohanty (1949:31,114)]. All said and done the *dombas* are cleverer and more intelligent compared to the tribals [Bell (1945:79); Mohanty (1943:27)].

It is for this reason that the tribals during times of distress go to the *domba*, particularly the village watchman, for advice [Bell (1945:79)]. Especially, when the tribal needs money, to pay the fines for having violated government laws, the *domba* takes them to the *sahukar* [Mohanty (1943:35,38)]. Here again the *domba* mediates

and puts through the transaction. It may be noted here that the *sahukar* does not take the *dombas* as *goti* or for that matter anyone whom he thinks will shirk work or desert, by going away to work in the Tea Gardens in Assam[52] [Mohanty (1943:106)]. However, the *sahukar* may use their services as casual workers.

[52] The agency tract was open to recruitment of labour for Assam in 1923.

Chapter 5

Land and Labour in Narayanguda

5.1 Introduction

In the previous Chapter it was mentioned that by late 1940's, there existed a section of the society which not only owned land but also had control over labour. However, after independence certain legislations such as: The Orissa Tenant Relief Act, 1955; The Orissa Land Reform Act, 1960; The Orissa Land Reform Amendment Act of 1965,1967 and 1973; The Orissa Scheduled Areas Money-lenders Regulations, 1967 and The Bonded Labour Abolition Law of 1976 came into operation. These Acts brought about changes in the property rights regarding land and labour, and hence, in the exchange relationships.

To examine the contemporary exchange relationships, as mentioned earlier, a study of a tribal village has been taken up. Here again, three kinds of economic agents were found after the preliminary round of survey. They are labourers, cultivators and trader-lenders. The interaction between these agents can be of three types, that is, between labourers and cultivators, cultivators and trader-lenders, and labourers and trader-lenders.

The present chapter looks into the interaction between the labourer and the cultivator and the next one the interaction between the cultivator and the trader-lender. The interaction between the labourer and trader-lender is subsumed in the latter and will be dealt with in the same. Furthermore, as the nature of interaction

between trader and cultivator also depends upon ownership of land, a crucial factor of production, this chapter also looks into the distribution of land between the cultivators and the labourers.

5.2 The Demand for and Supply of Labour[53]

One of the factors which affect productivity is the timely completion of various operations. Though the time of operation is to a large extent dictated by weather conditions, its completion depends upon the availability of labour. For small size holdings the required labour may be supplied by its family labourers. However, as the size of holding increases the labour supplied by the family members may not be enough for the timely completion of various operations, especially during peak periods. More over as the size of holding increases economic considerations such as better opportunities elsewhere, social considerations such as status and physical considerations such as leisure may reduce the availability of family labour.[54] This may be observed in the caste-wise size-wise distribution of average family labour in Table 5.1.

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[53] A theoretical framework for the same is given in Appendix 5A.

[54] This argument holds under increasing or constant returns to land, that is, an increase in the size of holding also increases the real income. It may be mentioned here that the economic, social and physical considerations may vary because of the overall socio-economic milieu or biogenetic diversity [Becker (1976)].

Table 5.1 Size-wise, Caste-wise Distribution of Average Family Labour in Narayanguda.

Size-wise holding of Cultivated Paddy Land (in acres) (1)	*Tribal Farmer* (2)	*Tribal Labourer* (3)	*Domba* (4)
Landless	-	2.00 (4.88)	3.20 (19.51)
1	-	2.50 (6.10)	3.25 (15.85)
2 - 3	2.33 (17.07)	2.67 (19.51)	-
4 - 6	1.50 (3.66)	-	7.00* (8.54)
> 6	1.00 (3.66)	-	1.00* (1.22)
All Classes	1.81 (24.39)	2.50 (30.49)	3.36 (45.12)

Note: 1) Family labour is measured in number of individuals aged above 15 years.
2) Figures in the Parentheses show the percentages of Total Family Labour.
3) * represents only 1 household.
Source: Field Survey.

Table 5.1 shows that the average family labour is lower for higher size holdings. Thus, it follows that the higher size holdings will have demand for labour. Further, it may be added that the average family labour for large size holdings is not only low but the nature of work performed by them is also different. They mainly supervise and monitor the work of hired labourers.

At the same time the smaller size holdings may have surplus labour for those operations in which large size holdings are deficient. Now, if the income from the small size holdings is not enough to meet the requirements of the family for the year then they may make themselves available as labourers. This is more likely to be the case for those who are landless. In such a situation, if

alternative opportunities are not available, economic considerations such as subsistence, social considerations of existence and physical considerations such as survival[55] play a major role in determining the supply of labour. Further, even if the small size holdings have enough to meet the basic requirements they may still make their labour available as a commodity to increase their level of living. Thus, it follows that there exists a section of the society who supply labour and another who demand it. The former have smaller size land or are landless but the latter are those with larger size land. Hence, it becomes all the more essential to look into the land distribution pattern before analysing the labour market.

5.3 The Nature of Land Distribution

The nature of land distribution may help us identify the sections of the society who are landless or with small size holdings, and hence, may supply labour. On the other hand, the households with large size holdings may demand labour. Secondly, the distribution of land may to a large extent explain the distribution of the produce.

At the outset, let us look into the cropping pattern of the sample households.

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[55] The three considerations look similar. This is so because at a lower level of living the differences between them may be negligible or absent.

Table 5.2 Cropping Pattern in Narayanguda.

Type of Cultivated Land (1)	Land (in acres) (2)
Total Paddy Land	87.00 (70.73)
Land under Vegetables and Other Food crops (LVOFC)	36.00 (29.27)
Total Cultivated Land	123.00 (100.00)

Note: Figures in Parentheses show the percentage to Total Cultivated Land.
Source: Field Survey.

A perusal of Table 5.2 shows that as much as seven-tenths of the land under cultivation is under paddy.

The above analysis does give a description of the cropping pattern however, it does not tell anything about the distribution of land between or within the castes. In Table 5.3 we give the distribution of the cultivated land between *tribal farmer*, *tribal labourers* and *dombas*. This stratification in the social hierarchy is also portrayed in the ownership of land. We have given the figures after correcting for an extreme observation[56] in the *domba* sample.

[56] By extreme observation we mean an outlier which will affect the distribution, and hence will give a distorted picture of the norm.

Table 5.3 Caste-wise Distribution of Cultivated land in Narayanguda.@

Caste Structure	Number of H Holds	Total Land			Average Land		
		Cultivated	Paddy	LVOFC	Cultivated	Paddy	LVOFC
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
T Farmers	12.00 (37.50)	90.00 (80.35)	57.00 (72.15)	33.00 (100.00)	7.50	4.75	2.75
T Labourer	10.00 (31.25)	16.00 (14.29)	16.00 (20.25)	-	1.60	1.60	-
Dombas	10.00 (31.25)	6.00 (5.36)	6.00 (7.60)	-	0.60	0.60	-
Total	32.00 (100.00)	112.00 (100.00)	79.00 (100.00)	33.00 (100.00)	3.50	2.47	1.03

Note: 1) @ denotes the table is corrected for an extreme observation among *dombas*.
2) Cultivated Land equals Paddy Land plus LVOFC
3) Figures in Parentheses show the percentages to column total.
Source: Field Survey.

From the above we can deduce that most of the cultivated land is owned by the *tribal farmers*, *tribal labourers* as a group have less land than the *tribal farmers* and they do not own any LVOFC land, and *dombas* on an average own less land than the *tribal labourers*. Again, *dombas* also do not own any LVOFC but, for the extreme observation. Thus, there is an iniquitous distribution of land between the castes. Within the three categories *tribal farmers* are the relatively better off caste. *Tribal labourers* constitute the next group. *Dombas* are the most deprived. This is more clearly brought about in the average land holding pattern within the castes. However, the gini coefficient for the household distribution across caste is 0.375, 0.3988 and 0.3917 for cultivated land, paddy land and LVOFC respectively. This is so because 37.50 per cent of the households are *tribal farmers* and

there is not much of a difference between the *tribal labourers* and *dombas*.

Thus, the above analysis shows a differentiation in the land holding pattern between the castes. This can serve as a starting point for discussing the iniquitous income distribution. Further, it may show how the ownership of land determines the behaviour of an individual as an economic agent, in this case cultivators and agricultural labourers. However, the above analysis does not throw much light on the nature of iniquitous distribution within the castes and within the village.

To analyse the iniquitous distribution within the castes and within the village we will make use of paddy land as most of the land under cultivation is paddy land and almost all the LVOFS is under the ownership of *tribal farmers*. In Table 5.4 the Size-wise caste-wise distribution of households and paddy land is given.

Table 5.4 Size-wise, Caste-wise Distribution of Households and Paddy Land in Narayanguda.@

Size of Paddy Land Holding	*Tribal Farmer*			*Tribal labourer*			*Dombas*		
	% of HH	% of Paddy Land	Average Land (acres)	% of HH	% of Paddy Land	Average Land (acres)	% of HH	% of Paddy Land	Average Land (acres)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
0	-	-	-	20.00	-	-	40.00	-	-
1	-	-	-	30.00	18.75	1.00	60.00	100.00	1.00
2-3	50.00	28.07	2.67	50.00	81.25	2.60	-	-	-
4-6	25.00	24.56	4.67	-	-	-	-	-	-
7-10	16.67	28.07	8.00	-	-	-	-	-	-
>=11	8.33	19.30	11.00	-	-	-	-	-	-
Total	100.0	100.00	4.75	100.00	100.00	1.60	100.00	100.00	0.60

Note: 1) @ Corrected for extreme observation in *Dombas*.
Source: Field Survey.

An observation of Table 5.4 shows that the minimum paddy land that a *tribal farmer* has is two acres. On the other hand 20 per cent of *tribal labourers* are landless and the maximum paddy land that a *tribal labourer* possesses is 3 acres. From among the *dombas* 40 per cent are landless and the rest of them have an acre of land each. This strengthens the earlier inference regarding the iniquitous distribution between the castes.

It was also observed that the distribution of paddy land among the *tribal labourer* is not as dispersed as in the case of *tribal farmers*. However, the dispersion is least among the *dombas*. It implies that the distribution is most iniquitous within the *tribal farmers*. The distribution is more equitable within *tribal labourers* as compared to *tribal farmers*. The distribution is most equitable within the *dombas*, but for the extreme observation. This is strengthened by the gini coefficient for household and paddy

land distribution within each caste. It is 0.8485, 0.4063 and 0.40 for *tribal farmer*, *tribal labourer* and *dombas* respectively.

The above analysis shows the distribution within the castes. Earlier the distribution between the castes was shown. The distribution within the village is given in Table 5.5.

Table 5.5 Size-wise Distribution of Households and Paddy land in Narayanguda.

Size of Paddy land holding (1)	Percentage share of Households (2)	Percentage share of Paddy land (3)	Average Paddy land (4)
Land less	18.75	-	-
1	28.13	11.39	1.00
2 - 3	34.38	36.71	2.64
4 - 6	9.38	17.72	4.67
7 - 10	6.25	20.25	8.00
above 11	3.13	13.92	11.00
All classes	100.00	100.00	2.47

Source: Field Survey.

The above distribution shows that nearly 47 per cent of households (landless and those with only 1 acre of paddy land) possess around 11 per cent of paddy land. On the contrary around 19 per cent of households (those with 4 or more acres of paddy land) own 52 per cent of the paddy land. This implies that the distribution is positively skewed. This may be highlighted by the average land holding, for all classes, which is closer to the lower size-class. The gini coefficient for household distribution, which is 0.9417, also supports the above proposition. Thus, one can say that the distribution is more iniquitous within the village, than in any particular caste.

The above analysis explains the iniquitous distribution of paddy land owned. However, the paddy land cultivated by a household may be different because (i) a particular economic agent cultivates the land owned by another economic agent or (ii) a particular economic agent owns the land cultivated by another. In the study region this could be either because of tenancy or mortgaging.[57] Thus, by making necessary corrections we arrive at the paddy land cultivated. In Table 5.6 the size-wise, and caste-wise distribution of yield in cultivated paddy land is given.

Table 5.6 Size-wise, Caste-wise Distribution of Yield in Cultivated Paddy Land. (*phutis*/acre)

Size of Paddy Land Cultivated (1)	Yield			
	Tribal Farmer (2)	*Tribal Labourer* (3)	*Domba* (4)	All Castes (5)
1	-	8.00	8.00	8.00
		(1.53)	(3.07)	(4.60)
2 - 3	12.00	8.50	-	10.25
	(18.39)	(13.03)		(31.42)
4 - 6	13.60	-	12.00	13.07
	(13.03)		(5.74)	(18.77)
7 -10	11.50	-	14.00	11.84
	(17.62)		(10.73)	(28.35)
>10	12.57	-	-	12.57
	(16.86)			(16.86)
All Size	12.25	8.44	10.94	11.47
	(65.90)	(14.56)	(19.54)	(100.00)

Note: 1 *phuti* equals 75 to 80 Kgs.
Figures in the parentheses show the percentage to the total produce from cultivated paddy land.
Source: Field Survey.

Table 5.6 indicates low yield for one acre size holdings and for

[57] To the 87 acres of Paddy Land Owned 10 acres were added because of (i) and 6 acres were subtracted because of (ii). Thus, leaving the paddy land cultivated at 91 acres.

tribal labourers as a whole. This is mainly for two reasons. Firstly, those households who possess only one acre of paddy land received these lands through distribution of ceiling-surplus land five/six years ago. Most of these lands are of poor quality [Bhuyan and Mohanty (1991:118)]. Secondly, there has been a variability in the use of fertilizers over the years. These households are not using the same amount of fertilizer as they used to do earlier. Some reason for these inconsistencies are explained in the next chapter.

From among the *tribal farmer* the size-class of 4-6 acres shows the highest yield. This is because of increasing use of fertilizers. The same is not portrayed in the next size-class as one household in that category does not use fertilizers. Finally, the size class of above 10 acres has a lower yield than the size class of 4-6 acres. This may be so because with increasing land size family labour does not increase commensurately (see Table 5.1). Thus, there is more dependence on the wage labourers who may not work as efficiently as family members. Then again the available family labour may not be as efficient as the size of land increases, for example they may not monitor the outside labour as efficiently. Thus, beyond a level as land size increase the yield may fall but, even under decreasing yield the cultivator would opt for cultivating more and more land if his net output[58] increases. In this sense there may be a trade-off between yield and total produce.

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[58] His valuation of net output may vary depending upon different considerations.

The distribution of the produce also adds to the iniquitous distribution as observed in the land distribution. However, the exact nature of this distribution depends upon the nature of exchange.

5.4 Contractual Arrangements in the Labour Market

From the discussions regarding the supply of and demand for labour and the nature of land distribution one may say that the contract between labourers and employers may to some extent explain the distribution of the produce. However, these contracts depend upon the demand for and supply of labour. Further, agricultural production is characterised by peak and lean seasons with a higher labour demand during the former.

To ensure a steady supply of labour during peak periods the cultivators enter into different kinds of contractual arrangements. The exchange labour system is one such contract. As per the contract two or more cultivators will work for each other. they will work in some order, that is, begin in one person's field and end in another. This order is maintained for all the operations. This not only saves them from labour payments but also allows them to reap the benefits from division of labour and economies of scale[59]. Further, as all the workers are in some sense residual claimants they may also save on costs of monitoring labour.[60]

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[59] In certain operations like water management they can save their labour time.

[60] A particular cultivator may not shirk work while in another,s field as the other person will retaliate while working in his field because of the cycle of operations. The person in whose field the operation was done first will not shirk even for the last operation because he wants to enter into such a contract

Though the labour exchange system brings about the economies of scale it also has its limitations. This system will not be viable with large scale holdings, particularly when the average family labour is likely to be less. Similarly, smaller size holdings with a steady supply of labour may not enter into such a contract.

In Table 5.7 data are given on the average family labour for those households who have 1 acre of cultivated paddy land.

Table 5.7 Average Family Labour for Households with one acre of Cultivated Paddy Land.

Caste (1)	Average Family Labour of Households who entered into Exchange Labour Contracts (2)	Average Family Labour of Households who did not enter into Exchange Labour Contracts (3)
Tribal Farmer	-	-
Tribal Labourer	2.0 (10.0)	3.0 (10.0)
Dombas	2.0 (18.2)	4.5 (18.2)
All Castes	2.00 (9.1)	4.0 (9.1)

Note: 1) Family labour is measured in number of individuals above the age of 15.
2) It may be mentioned that a *tribal farmer* has at least two 2 acres of paddy land.
3) Figures in the parentheses show the percentage of households in that caste.
Source: Field Survey.

In Table 5.7 it is seen that households with lower average family labour enter into exchange labour contracts. Similarly, one respondent from the *tribal farmer* category had also entered into exchange labour contracts. He had only 2 acres of land and the average per acre family labour of this household was 1.5. Thus, it

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once again next year. Apart from this there may be a desire to fulfil the commitment or the fear of social boycott.

can also be said that no household with large size holdings (more than two acres) has entered into exchange labour contracts.

Again, if there is one household which has more land than the other, with which it enters into an exchange labour contract then the latter may have to work more. In such a situation they may enter into a exchange contract for mandays of work. Similarly, if a particular household has more family labour than the other here again they may enter into a contract for mandays of work. In the former case if both of them have the same amount of family labour then the one with more land may resort to other labour arrangement contracts. Similarly even in the latter case if both of them have the same size of land then the one with less family labour may take the help of other labour services.[61]

Thus, it follows that exchange labour contracts will not only be limited to small holdings with low family labour but it is also more likely among those households who have equal size land holdings and family labour.[62]

Further, it was observed that the exchange labour contract is declining in its occurrence. From among the respondents there were 25 per cent of *tribal farmers* and 30 per cent of *tribal labourers*

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[61] It may be reiterated that they will enter into the contract in the first instance because family labour is deficient

[62] It may so happen that a particular household may have surplus for one kind of operation, say weeding but, deficient family labour for another kind of operation, say ploughing. At the same time there will also be another household with surplus family labour for ploughing but deficient family labour for weeding. In such a situation both the households may also enter into exchange labour contracts.

who had earlier entered into such contracts but now they are not. The size of paddy land for these cultivators is 2 or 3 acres. This may be because of the increasing use of fertilizers, which increases the timeliness in agricultural production, and hence, reduces the economies of scale of the above arrangement. It thus follows that the advantages from exchange labour contract also depend upon the level of technology.

It was mentioned that the large size holdings may have less family labour available for agricultural purposes (see Table 5.1). In such a situation these households will depend upon outside labour even in slack seasons. Here the employer, to reduce his search cost, may like to enter into long term labour contracts. This may lead to the employment of Annual farm servant or *khamari*. To ensure that the contract is enforced the employer will employ a *khamari* who has less or no chance of defecting. Similarly, the supply of *khamari* will be from those who do not have better opportunities elsewhere. With the absence of alternative opportunities they are more likely to be landless or from households with small holdings who have surplus family labour. Further, the employer may give the *khamari* different incentives including higher wages to prevent him from defecting.[63]

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[63] Thus, the efficiency of the *Khamari*, that is, whether he is strong or weak depends upon the alternative opportunities available for the labourer and the incentives provided by the employers. If the efficient labourers have better opportunities then they will not be available as *Khamari* however, the employer would prefer the strongest or the efficient labourer with the incentive he is going to provide. This may provide an explanation as to why farm servants can be weaker [Binswanger et al (1984)] or healthier [Sarap (1991b:A170)] members of the labour force.

In the study village, as per the contract, the *khamari* is supposed to work in the paddy and LVOFC, look after the water management, feed the cattle, guard the crop against possible theft, to mention a few and in return he is paid 4 to 5 phutis of paddy, 3 meals a day and a blanket in the winter. A part of the payment (1 or 2 phutis) may be paid either at the beginning of the contract or even before the contract. This is more to meet the consumption requirements of the *khamari's* household during the lean season. It may also be in the form of consumption loans.

However, in recent years the *khamari* system is also on the wane. Four to five years ago all those households with more than 4 acres of cultivated paddy land had availed of the facilities of *khamaris* however, at present there are only two respondents from among the *tribal farmers* who do so. One thing common between the two employers is that their total real income is higher than the others.[64] Now, if the real income is higher, their Quality-of-Life, and hence, consumption pattern would be relatively better. Therefore, in such a situation the *khamari*, who takes 3 meals a day in the employer's house, has a higher incentive in these household with a higher income.

One reason for the decline in the institution of *khamari* is the increase in the alternative opportunities, particularly in the lean season. The opportunities come from the bridge construction across

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[64] One household is that of the village headman, who has 14 acres of cultivated paddy land and the income from this household is more or less from agriculture. The other household has a higher income as one of the family member is a Government Servant employed in the department of telecommunications.

the Baunsadhara near Gunupur, availability of work in Muniguda the headquarters of a nearby block which is developing as a small industrial centre (the workers migrate to this place in the lean periods), and above all the increasing wages because of other contractual arrangements.

Thus, it can be said that as opportunities increase, the overall demand for labour will increase leading to increase in the wage rate and as a result the institution of *khamari* may be limited to households with a higher real income which can provide incentives to preempt defection.

With the decline in the institution of *khamari* there is more and more dependence on the casual labour market. Further, the households who have employed *khamari* also depend upon the casual labour market when they require more labour, particularly during the peak season.

In the casual labour market the employer and labourers enter into short-term contracts either for a day or for a week or till the completion of a particular operation. The wage rates may be fixed either in time or in piece rates. When the labourer works for a day or week the wages are paid in time rate at the prevailing market rate or which was agreed upon.[65]

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[65] The wage rate for a particular work apart from temporal and spatial differences is also different for males, females and children. If the agreement is for a few days or a week then the labourer is paid nw where n is the number of days worked and w is the daily wage rate.

However, when the contract is till the completion of a particular operation the wage rates may be paid in time or piece rates. In the case of the former the labourer is asked to work till the completion of a particular operation and the labourer is paid the daily wage rate times the number of days worked.

If the nature of contract is as mentioned above then it may be in the interest of the labourers to elongate the work so that his total income is higher. The labourer will do the above if there is no system of evaluating or monitoring his work. Though for agricultural operations monitoring is difficult yet some qualitative assessment can be made if there are a number of labourers performing the same work.[66] The labourers are in a dilemma because if a particular labourer slows down the work then he may loose the contract but, if all the labourers slow down their work then all of them stand to gain. The latter requires co-ordination or co-operation between the labourers to slow down work.

Once the labourers co-ordinate among themselves then it may be advantageous for all of them to slow down the work. However, once they are organised then they may demand higher wages. One such way of demanding higher wages is in the form of piece rates by a group of labourers.

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[66] Suppose in a unit of land **k** labourers are employed for harvesting. Now, if there are **r** rows of paddy then each labourer will be assigned **(r/k)** rows. Thus, the cultivator can come at a particular interval or at the end of the day and see the length which has been covered by each labourer. In the above argument we have assumed that the employer does not work along with the labourers but if he also works and covers **(r/k)** rows then the monitoring becomes easier.

The institution of group labour which prevails in this region is called *guta*. As per *guta* the wage rate is fixed, and hence, the group would like to finish the work faster. This will not only increase the daily wage rate[67] but will also make the group available for another contract. This is so because the more contract the group enters into the higher will be their income. This may also be a reason for the decline of *khamari* or Individual casual labour.

Further, in the study region, the *guta* system has become so remunerative that even during the lean season if a cultivator requires a number of labourers for a particular operation the labourers enter into these types of contract.[68] The increase in remuneration may be explained by the trends in the wage rate.

5.5 The Trends and Nature of Wage Payment

The decline in *khamari* and Individual casual labour and the emergence of *guta* is a recent phenomenon.[69] This has increased the bargaining power of the labourers as a result of which the real wage rate has also increased. The increase in wage rates is given in Table 5.8.

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[67] As $w = (1/k)(f/d)$ where w is the daily wage rate; k denotes the number of labourers (if male, female and children are paid differently then appropriate adjustments can be made); f denotes the total fixed wage; and d denotes the number of days worked. Thus, if d is reduced then w will increase.

[68] For those operations which require 1 or 2 labourers the individual labour contract prevails.

[69] The system of *guta* was almost absent 4 to 5 years ago.

Table 5.8 Changes in the Wage Rate. (wages in paddy)

Time (1)	Daily Wage Rate (2)	Total Wage Cost for one acre of Transplantation (3)
4 to 5 years ago	1 - 2 *manas*	1 - 2 *phutis*
Kharif 1992-93	3 - 4 *manas*	2 - 4 *phutis*

Note: 1) 1 *mana* = 4 Kg of paddy approx. and 20 *manas* = 1 *phuti*.
2) The wage cost (= wage rate) for harvesting is more or less the same as transplantation.
Source: Field Survey.

The Table 5.8 shows that the wage rate has doubled within four to five years.[70] As the increase in wages are in terms of paddy, it may be said that the real wage of the labourers has increased. However, the increase in real income depends upon his income terms of trade, that is, the differences in the quantity of paddy he received and the changes in the relative price of paddy vis-a-vis the other commodities he consumes. If the labourers' consumption basket or consumption of a particular commodity which he consumed earlier, *ceteris paribus*, then one can say that his real income has increased. To see whether the real income has increased we give the changes in the consumption level of the labourers in Table 5.9.

[70] However, increase in real wage was preceded by increase in production as a result of increasing use of fertilizers since 7 to 8 years. Some reasons for the increasing use of fertilizers will be discussed in the next chapter.

Table 5.9 The Changing Consumption Level of Labourers.

	Questions Asked (1)	Replies by Labourers (2)
1)	Have the non-agricultural income opportunities gone up during the last 4 to 5 years ?	Yes (100.00)
2)	Have the total wage income from agriculture gone up in the last 4 to 5 years ?	Yes (100.00)
3)	What was the situation like 4 to 5 years ago with regard to availability of food ? Did you ever remain hungry ?	Yes (92.41)
4)	Did you ever remain hungry during the previous year ?	No (61.54)

Note: 1) We give the responses of households who are either landless or have 1 acre land each.
2) The figures in the parentheses give the percentage of respondents who replied as such.
Source: Field Survey.

Table 5.9 suggests that the real income of most of the labour households has increased. It also shows that 4 to 5 years ago the labourer faced the possibility of remaining hungry for a few days during the lean periods. During this time they took consumption loans from cultivators to be returned in labour either in the form of *khamari* or individual casual labour.

Further, the table also shows that over 38 per cent of households still had difficulties and had to do without food even in the year prior to the period of survey. This implies that the increase in income is not enough to meet the requirements of the family in the lean season. What could have been the reason ? On closer examination it was found there was a high association between those families who had to remain hungry during the lean season and a larger amount of income being spent on alcohol consumption,

was not a necessary condition but, it certainly was a sufficient condition thus, what matters is not alcohol consumption *per se* but the proportion and amount of income spent on it. It is quite obvious because if more income is spent on drinking less of it will be available for consumption of other commodities, in this case food.

Again, Table 5.8 shows that the wages given have a range. This is rather a variation in the wage rate because of fluctuations in the demand for and supply of labour. The variation in the wage rate for operations like ploughing, transplanting and harvesting undergo three phases. We give the variation in the *guta* wage for transplantation during Kharif 1992-93 in the Figure below.

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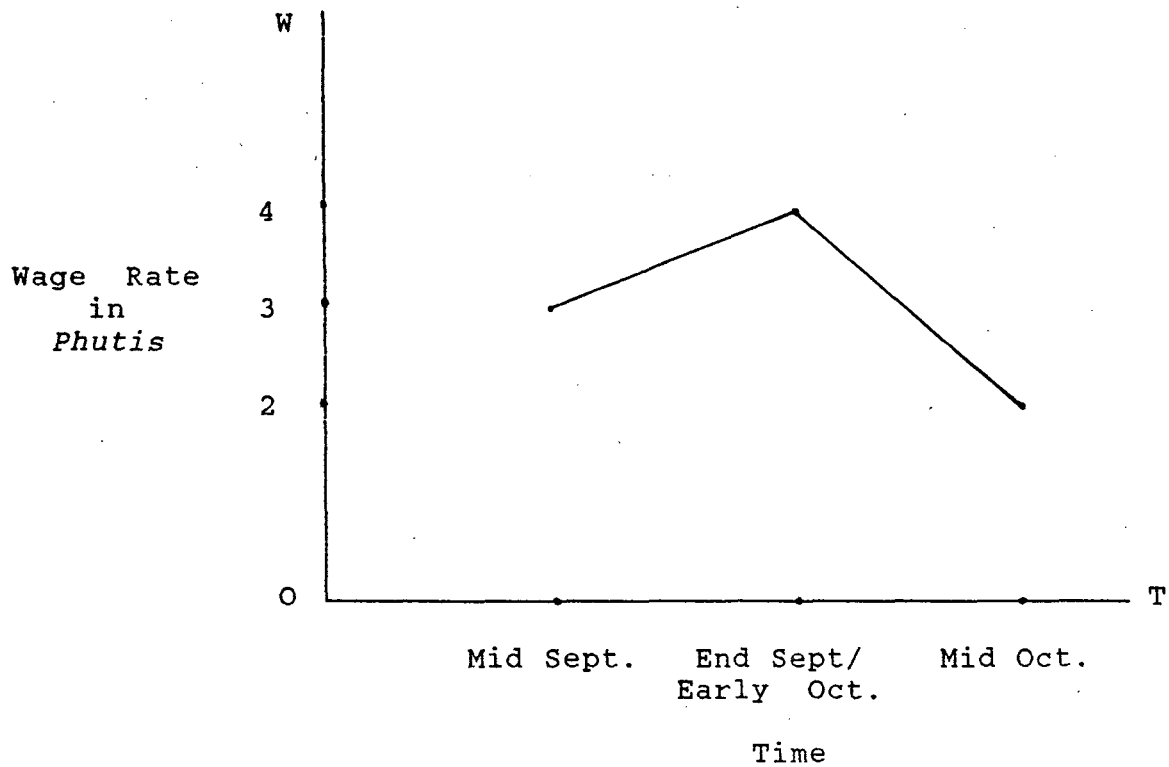
[71] The influence of family size would be negligible as all the members of these households are available as labourers. Even children start working at an early age.

Figure 5.1 Variation in *Guta* Wage per acre of Transplantation.



In the first phase the operation begins in those households who have large size holdings and they offer a wage to preempt the efficient and sincere labourers[72]. This not only reduces the search cost of the employers but also reduces the uncertainty regarding the completion of work.

As time passes by more and more cultivators begin the operation, and hence, are in search of labour. This increase in demand for

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[72] It is another matter that the labourer(s) may be sincere to the farmers with larger size holdings because if this year's production is higher then the labourer(s) will not only be preferred next year but may also get a higher wage. However, among the labourer(s) some are more efficient and the farmers employers would prefer to employ them.

labour brings about an increase in the wage rate. Here one may also wonder why the efficient and sincere labourers agree to a wage rate which is lower at an earlier period. This is so because the total income that they get will be more as those employers have larger holdings. Secondly, if they finish the work by the beginning of the second phase they can also avail the opportunities in the second phase. It may also be mentioned that the increase in wage in the second phase is due to the rise in demand for labour.

As, most of the cultivators finish the work in the second phase, it follows that there will be little demand for labourers in the last phase. Further, the supply of labour also increases as the cultivator with small size holdings, after finishing the work in their own field, make themselves available in the labour market. The decline in demand and the increase in supply leads to the fall in the wage rate.

In addition to the fluctuation in the demand for and supply of labour the variation in wage may be because of other social considerations such as Who are the employers and labourers? Are they tribals or *dombas* ? If the employer is a *domba* then no tribal labourer will work in his field because a *domba* is lower in the social hierarchy. If the tribal farmer is the employer then he may have preferences for tribal labourers. Further, if the labourers have come from nearby villages[73] then they may prefer to take payments in cash to reduce the transport costs of carrying paddy

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[73] The labourers may be from villages within a radius of 8 to 10 kilometres. They come to the work place every day and go back to their villages in the evening.

back home. This behaviour of labourers from nearby villages also depends upon the availability and price of paddy near their place of residence.

5.6 The Composition of Labour

From the above observations one can say that the labour requirements for various agricultural operations can be met from within and outside the family. The demand for outside labour leads to different types of contracts. The composition of labour, in a nutshell, gives the availability of various types of labour services in the study region.

5.10 The Composition of Labour.

Nature of Labour Services (1)	Percentage of Total Labour (2)
Family Labour (work in own field)	41.17
Manual labour and Supervision	31.76
Supervision	9.41
Exchange Labour	10.59
Hired Labour	48.24
Khamari	3.54
Casual labour (individual and *guta*)	44.71

Note: 1) Total labour refers to the number of labourers from the respondents households including *Khamari*.
2) The above type of labour services may be overlapping. This has been avoided in the calculation. It has been mentioned in the explanation below.
Source: Field Survey.

It must be reiterated that the categories of family, exchange and outside labour may be overlapping. A family labourer who supervises the work of hired labourers may also do some manual work. Similarly, family labourers who do manual work may also work as casual labourers so also the casual labourers, who have land, will work in their own fields. Thus, to avoid overlapping those

labourers who spend most of their labour time[74] in their own fields are put under Family labour in Table 5.10. Likewise those who spend most of their labour time as casual labourers are put as such.

Further exchange labour by definition implies that those involved in the contract are also family labourers. They may also work as casual labourers. In Table 5.10 all those who have entered into exchange labour contracts have been put under exchange labour. Among the hired labourers the *Khamaris*, as per the contract remain tied throughout the season, and hence, cannot come under any other category however, if he defects then he can also become a casual labourer. Finally, there may not be much of difference between individual casual labour and *guta*.

5.7 Conclusion

It may be stated that social, physical and economic considerations would decide the availability of family labour for cultivation purposes. The same considerations would lead to certain households with surplus family labour and others with deficient family labour. As expected the former consists of landless and households with small size holdings and the latter are basically from households with large size holdings. This is elaborated in Appendix 5A.

Landlessness of certain households and large holdings of others imply that the distribution of land is iniquitous. This iniquitous distribution was highlighted both within and across the castes. It

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[74] Here, labour time refers to total labour time spent in agriculture.

was found that *tribal farmers* are better off and the *dombas* are the most deprived. However, the distribution is most iniquitous within the *tribal farmers* and least among *dombas.*

Then again the peculiarities of agricultural operations lead to variations in the demand for labour. It was observed that households with small size holdings and lower family labour may enter into labour exchange contracts but on the contrary households with higher real income employ *Khamari.* It was also observed that the institution of *Khamari* and Individual casual labour have given way to *guta.* The rising importance of *guta* may be because of increasing non-agricultural work opportunities in nearby places during the lean season and increasing co-operation among the labourers. This has led to the increase in real wage though the prevalent mode of payment is still in kind. It may be mentioned that the increase in real wages was preceded by an increase in agricultural produce.

Appendix 5A

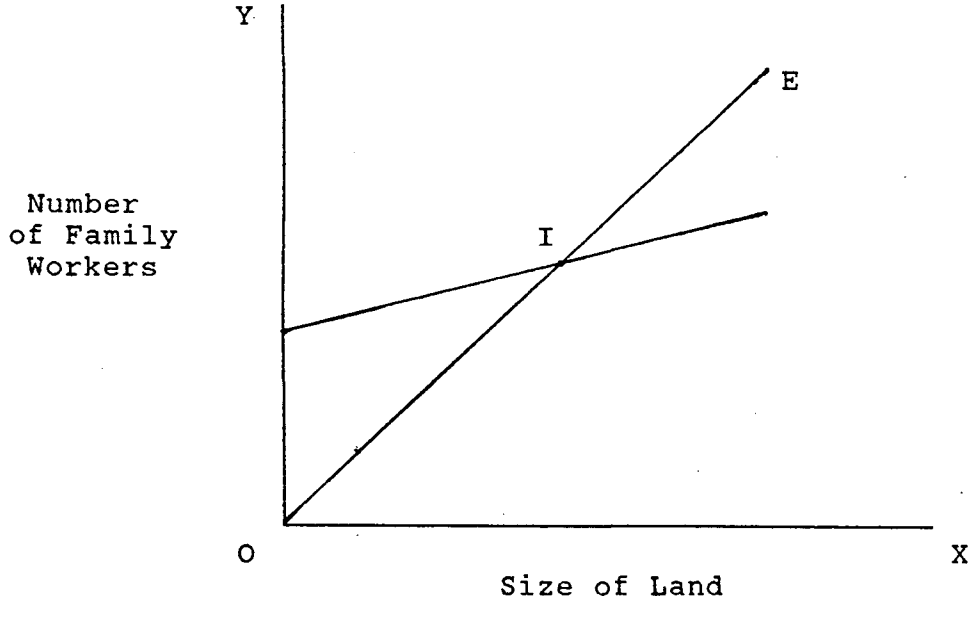
5A.1 Demand for and Supply of Agricultural Labour

For simplification it is assumed that (1) land is homogenous and (2) there are constant returns to scale. From the above assumption it follows that there are constant returns to land.

Thus, given the technology one can say that a particular operation, O_i in a unit of land, L a particular amount of family workers of type i, FW_i is required. Let this amount of family workers be defined as a unit of family workers for operation O_i. Hence for operation O_i the amount of family workers of type i required will be equal to the size of land, that is $FW_i = L$.

This may be explained diagrammatically as follows.

Figure 5A.1 The Required size of Family Workers.



In the above diagram the X axis represents the size of land and the

Y axis represents the number of family workers. The line OE is the line of equality which denotes that $FW_i = L$. It thus follows that households with excess family workers will be above the line of equality. Similarly, households with less family workers will be below the line of equality.

There may be problems of measurement with regard to the unit and the actual size of family workers FW_i. In such a situation we may denote FW_i with the number of labourers[75]. Here $FW_i = L$ should be rewritten as $\alpha FW_i = L$ where, α is the proportion of family workers required to complete the operation O_i in a unit of land and the latter reduces to the former when $\alpha = 1$.

Thus, even if α is not known $\alpha FW_i = L$ can be shown diagrammatically as a straight line which starts from the origin. In such a situation if there exists a section of the society who are landless and offer their labour services then they lie on the Y axis or to put it squarely they have excess labour.

Now, it may so happen that with increase in size of land the number of family workers may also increase. If the rate of increase is higher in the latter, $d(FW_i)/dL > 1$[76] then one can say that there is no demand for outside labour for operation O_i. However, if rate of increase in the latter is smaller, $0 < d(FW_i)/dL < 1$ then there

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[75] Weightage may be given to age, sex, the time that the individual is available for work, nature of work and other considerations.

[76] It is assumed that $FW_i = f(L)$.

will be some size of land where family workers will be deficient.[77] If for simplification we assume a linear association between size of land and number of family workers the above situation may be graphically visualized as a straight line with a positive intercept which intersects the line of equality at I in figure 5A.1. Thus, one can say that observations to the left of I may have surplus labour and those to the right of I will have deficient labour. This otherwise means that landless households with small size holdings may have surplus labour and households with large size holdings will have deficient labour.

Whether in particular society I will be reached or not depends upon the limits to the size of land holdings either through legislation or as a matter of fact and on the values of α and FW_i. It may be reiterated that if information on α and FW_i is available then the observations above $\alpha FW_i = L$ will have surplus labour and those below will have deficient labour.

Another point which needs to be mentioned is that there need not be any set pattern between size of land and number of family workers. In other words households with the same size of land may have variations in the number of family workers. Similarly, households with variability in size of land may have the same number of family workers. Then again, there may also be problems in measurement.

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[77] This also holds when family worker is constant for all households, $d(FW_i)/dL = 0$ or if family workers decrease with increase in size of land, $d(FW_i)/dL < 0$. The latter may be more likely because of social, economic and physical considerations as discussed in Section 5.2. Also see Table 5.1.

Chapter 6

Traders, Cultivators and the Produce

6.1 Introduction

In economies which are predominantly agrarian the demand for commodities which are not produced in the economy may be met by the surplus agricultural produce of the region. In rural areas the above transaction may be facilitated by a group of individuals called *village middlemen* [Hicks (1969:27-28, 64)] or traders.

This Chapter will analyse the intricacies of the exchange system arising out of the economic interaction between the cultivator and the trader. The important questions raised here are as follows:

(1) Does this interaction lead to iniquitous income distribution ?

(2) Does this interaction lead to any inter-locking between various markets, such as between factor and product markets ?

(3) If so, has this led to backwardness or stagnation in agricultural production ?

(4) Is there a grain-drain from the region ?

6.2 The role of the Trader

At the outset, it is necessary to mention that in the study region the credit market has not developed and much of the transaction takes place through barter. In such a situation certain goods become *generalisms*[78]. Paddy plays such a role in this region.

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[78] Hicks (1969: 64) refers to them as goods which are accepted by most of the economic agents.

Thus, it follows that in various transactions that the trader enters into with the cultivator his ownership over paddy will increase. In the study region the major transactions the trader enters into are (i) selling provisions and other commodities for daily consumption, (ii) providing loan for consumption and production purposes, and (iii) buying paddy from the cultivators.

Here an attempt is made to analyse these functions and see in the process how much of the produce is transferred from the cultivators to the traders.

6.3 The Market Structure

The study village has three *Komati* (trader) households, all of whom are involved in selling provisions. But, the survey covered only two of them. To have an idea of the market structure some general information regarding the behaviour of the two *Komatis* surveyed is called for.

Table 6.1 Information regarding Price and Quantity Behaviour by *Komatis* who sell Commodities.

Questions Asked (1)	*Komati* No.1 (2)	*Komati* No.2 (3)
1. Do you measure the commodities you sell using a proper measure ?	No	No
2. Do the other *Komatis* measure the commodities they sell ?	No	No
3. Are the prices charged by you the same as other *Komatis* ?	I don't know	No
4. Do you know what prices other *Komatis* charge ?	No	No

Note: *Komati* No.2's reply to the 4th question is because he is not aware of the prices charged by the other *Komatis*. His reply could have been different if question 3 would have followed question 4. However, the *Komati* was asked "If you do not know the price then how can you say that they are different ?" To this he replied that at times the prices charged may be same but he still maintained that most of the time it will be different because the prices at which they buy may be different, their transportation costs will be different (level of operation) and above all their customers are different.

Source: Field Survey.

Economic theory tells us that the presence of few (three) sellers in the market may be called an oligopoly market. However, the mere presence of three sellers does not imply that the market is oligopolistic. One of the important characteristics of an oligopolistic structure is the price co-ordination or quantity co-ordination between the sellers. As, shown in Table 6.1, the observation in the study village shows that neither a price nor quantity co-ordination between the sellers. Hence, it will be interesting to know what the market structure is like. Now, let us analyse the buyers' behaviour.

Table 6.2 The Buyers' Behaviour.

Questions asked (1)	Replies by buyers (2)
1. Do you know the price(s) offered by *Komatis* ?*	No
2. Most of the time whom do you buy provisions from ?**	*Komati* No.1 56.25 *Komati* No.2 31.25 *Komati* No.3 12.50
3. How often do you buy from the other *Komatis* ?	Very rarely
4. If the good is not available with the particular *Komati*. What do you do ?	Go to the other *Komatis*
5. Do they sell the goods to you ?	They may not***

Note: 1) * here price refers to the amount of paddy or its money equivalent they give for provisions and other commodities they buy.
2) ** the reply indicate the number of households buying provisions from that particular *Komati*.
3) *** In reply to this they were also asked "What do you do if they do not sell to you ?" The replies by the buyers was many such as "Nothing", "What can we do", "We come back", or if it is very necessary "We wait till the *Komati* from whom we buy gets it" or "We send someone to Gunupur".

Source: Field Survey.

The buyers' behaviour, given in Table 6.2, indicates that they are largely confined to a particular *Komati*. This shows that the market is segmented. Further, it also conveys the attitude of sellers to follow a strategy in which the buyers are not encouraged to transact with all the sellers. The segmented nature of the market might imply that the sellers have a higher bargaining power, and hence, to an extent a monopoly control.

6.4 The Amount of Barter

In the above exchange, the sellers provide provisions and in return

take paddy. They will also take money but, they would prefer taking paddy because paddy has a higher income earning capacity than money. This is so for two reasons. First, they can sell paddy in the commercial centres at a higher price. Second, they can give the same paddy back as loan to the cultivators when the value of paddy is higher. These points are elaborated later.

What is the amount of paddy that the traders get? The sample households could not recollect the amount of transaction and therefore this information is not available. However, the *Komatis* surveyed gave an estimate of the paddy collection, because of the above transaction, over the months. The estimates are given in a range where the lower and upper limits denote a bad or good harvest respectively.[79] These estimates are given below.

Table 6.3 Expected Amount of Paddy received by *Komatis* through Barter.

Season	Paddy received per month in *Phutis*.	
(1)	*Komati* No.1 (2)	*Komati* No.2 (3)
Dec & Jan (Post-Harvest)	100 - 150	30 - 40
Feb, Mar & Apr.	50 - 75	10 - 20
May & June	20 - 30	4 - 5
July to Nov.	8 - 10	3 - 4
Total	430 - 635	113 - 170

Source: Field Survey.

Here too, the date is missing for the *Komati* household, which has

[79] As the village is irrigated deficient rainfall does not affect the production in a severe way. The upper limit refers to the returns of the previous year, a good harvest year.

not been surveyed. We make use of the information regarding the scale of operation in Table 6.2. Only 12.5 per cent of the buyers transact with this *Komati*. Further, from the observations in the field survey it is evident that the characteristics of these buyers are similar to those who transact with *Komati* No.2. Using these one can make an approximation for the amount of Paddy received by the *Komati* not surveyed by multiplying (12.5/31.25) with the transactions of *Komati* No. 2. Thus, the range of transaction for *Komati* not surveryd is 45.2 to 68, and hence, the expected mount of paddy received by the *Komatis* through barter from the village will be 588.2 to 873 *phutis*.[80]

The above information is for the whole village. To arrive at the percentage share of this transaction to the total produce, figures regarding the total produce of the village is necessary. The total produce figures for the sampled households is available. To arrive at the total produce of the village one has to blow up the sample figures. However before blowing up one has to make corrections for extreme observations. There are three such observations. One of them is a tribal farmer and the other two are from the *dombas*. The tribal farmer is also the village headman. A statistical correction was made to avoid overestimation of the total produce.[81]

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[80] This would be an underestimate of the actual transactions, for it is a tendency to understate one's income.

[81] In a population of **N** we take **n** samples. If the total produce for the **n** sample is **y** then the total produce for **N** is **(N/n)** times **y**. Now, if there is a particular respondent, **r** from among the **n** who is an exception, that is there is no one of type **r** in the whole population then a more correct estimate of the total produce can be $[(N-1)/(n-1)]\ (y-y_r)+y_r$ where y_r is r's produce.

Table 6.4 Total Paddy Production of the Village. (in *phutis*)

Caste (1)	Blown up (2)	Extreme Observations (3)	Total (4)
Tribal Farmers	1741	176	1917
Tribal Labourer	438	-	438
Dombas	114	154	286
Total	2293	330	2623

Note: A *phuti* equals 75 to 80 Kg.
Source: Field Survey.

The total produce of the village, given in the above table, after correcting for extreme observations, is found to be 2,623 *phutis*.

The figures for the range of paddy transaction and an approximation for the total produce of the village are available. Using these one can calculate the amount of paddy transacted through barter.

Table 6.5 Percentage of the Produce Exchanged for other Commodities.

Total Produce	Paddy received by *Komatis*		Percentage of produce exchanged	
	Min	Max	Min	Max
(1)	(2)	(3)	(4)	(5)
2623	588.2	873	22.42	33.28

Source: Field Survey.

Thus, as the above table shows, the percentage of paddy produce given in exchange for other commodities is found to be within the range of 22.42 per cent to 33.28 per cent. In the presence of monopoly power by the sellers, along with uncertain price and quantity behaviour it can be inferred that the profit margin may be very high. In order to make a more appropriate approximation one

has to look into the other transactions and the interest rates charged therein.

Again, Table 6.3 shows that much of the transaction between the villagers and the *Komatis* takes place immediately after the harvest. This is the time when the supply of paddy is more and the value of paddy vis-a-vis other commodities is low. However, the transactions decline and are at very low levels from July to November. This is the time when the work for the next year's harvest begins. This is also the time when the cultivator may require paddy both for consumption as well as production purposes. The demand for paddy increases and the value of paddy vis-a-vis other commodities increases. This is the value in store for paddy which is enjoyed by the trader because he can store the paddy.[82] By storing the paddy the trader can sell it at a higher price in the commercial centres. This is also the reason why the trader prefers to take paddy rather than money.

6.5 The Rationale of the Trader

The trader now has the choice to transact between two markets. On the one hand he can give the paddy as loan to the cultivators, on the other hand he can sell the paddy in the commercial centres.[83] He may gain by transacting in both the markets. First, he cannot use all the paddy for giving loans, because there is a limit for

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[82] This does not mean that the cultivator cannot store the paddy, rather he is preempted from the option of storing paddy.

[83] There is a daily bus service from the study region to the city of Vishakapatnam. This is a means of direct communication of the traders with the commercial centre of Vishakapatnam. The bus is operated by the Andhra Pradesh State Road Transport Corporation.

the loans to be used for production purposes. He can give loan for consumption purposes but, this will not ensure him a steady increase in income. The trader's act of lending is not because of any altruistic motives. He will lend if he is assured of safe recovery of the loan. Thus, the extent to which he lends depends upon the production capacity of the borrower.

Similarly, selling all the paddy in the commercial centres will preempt his future source of income.[84]

Thus, the trader would like to have a judicious mix of the two operations which will not only maximize his present income but also ensure him a steady source of income in the coming years. We can call this behaviour of the trader as one which is analogous to the optimal path [Ramsey (1928)].

6.6 The Forward Trading of Paddy

From the above observations one can say that the trader can also operate as a lender. In such a situation what will be the security for loans ? It is here that there is forward trading of paddy. In this system the *Komati* lends[85] to the cultivator in return for the paddy to be harvested.

One point that needs to be cleared is the prevalence of two prices for paddy. One is for the paddy that was harvested in the previous

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[84] There may be different traders operating at different levels however, the trader in the village will see to it that some paddy is reinvested back.

[85] The lending can be in terms of money, commodities for consumption or inputs used for paddy production.

season and the other is the paddy that will be harvested in the coming season. The price of the paddy harvested in the previous season is invariably higher and the person who owns this paddy is the trader.

The price for the paddy to be harvested in the coming season is low. The owner of this paddy is the cultivator. When the cultivator goes to the trader-lender for loan, the trader-lender makes him enter into a future contract for the paddy to be harvested in exchange for the loan.

The cultivator may incur loans either for consumption or for production.[86] In the former case there is a trade-off between the present subsistence and the future subsistence. Though the cultivator would be better off if he owns all the paddy that is harvested he still enters into a contract which transfers the property rights of this produce to someone else because without the contract his existence may itself be questioned. In the latter case there is a trade-off between the immediate future and the distant future. The rationale runs as such, it has already been mentioned that the cultivator would be better off if he has all the paddy that is harvested. However, the paddy has to be produced first and then possessed. Further, it may so happen that a production loan, say, in the form of fertilizers, would increase the production more than what is to be paid back for the loan. In such a situation the cultivators income would increase instead of

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[86] The loans could be for other purposes however, majority of the loan is for consumption or production purposes.

decreasing.

Further, the transaction is accentuated by some more reasons. First, the inaccessibility of credit by the cultivator. Second, the information by the trader-lender that the cultivator is in greater need of the loan. Third, the cultivators' ignorance that he is also as much needed to the trader-lender, as the trader-lender is to him. Fourth, the traders' monopoly power and finally, absence of co-operation among the cultivators.[87]

It can also be mentioned here that the behaviour among the trader-lender is co-ordinated in their lending behaviour. If a particular cultivator has taken loans from a particular trader-lender then he will not be given loan by another trader-lender. The trader-lenders operating in this region share information on this matter between themselves.

The above conditions arising out cultivators' of inaccessibility to credit and asymmetric information would lead the cultivator to accept the trader-lenders' offer. This leads to the cultivator entering into forward trading of paddy to be harvested at the price offered by the trader-lender. The forward trading prices of paddy are given in Table 6.6.

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[87] The forward trading prices certainly cannot be reduced by one cultivator not taking loan it needs a co-operative behaviour among the cultivators.

Table 6.6 Monthly Variation in Price of Paddy as a Collateral for Loan.

Month (1)	Forward Trading Price of one *Phuti* of Paddy in Rs. (2)	Rates of Interest	
		Min. (3)	Max. (4)
August-September	75 to 80	328.13	366.67
September-October	100 to 120	218.75	275.00
October-November	130 to 150	175.00	211.44
November-December	160 to 180	145.83	171.88
December-January (Post-harvest Price)	210 to 220		

Source: Field survey.

As per the above transaction the forward trading of paddy to be harvested takes place at the price offered by the trader-lender. As the above table shows this piece is very much lower than the post harvest price. Let us denote the forward trading price and the post harvest price of paddy as p^{ft} and p^{ph} respectively. Because of the p rice differential the trader-lender will benefit (p^{ph}/p^{ft}) times for every unit of paddy transacted. Further, for every unit of paddy transacted the debtor should pay 1.25 units of paddy, of which 0.25 units of paddy, that is, 25 per cent is what the trader-lender claims to be the rate of interest. However the actual rate of interest would be $(p^{ph}/p^{ft})(1.25)(100)$.

In the study region the forward trading price for each month and the post harvest price have a range, that is they have a lower and upper limit. Here we can denote the prices as p_l^{ft} and p_u^{ft}, and p_l^{ph} and p_u^{ph} where the subscript l and u denote the lower and upper limits. Now, as the price of paddy has a range the interest rate charged should also have a range. Thus, the minimum and maximum

rates of interest can be represented as $[(p_l^{ph}/p_u^{ft})(125)]$ and $[(p_u^{ph}/p_l^{ft})(125)]$ respectively. Now, even if one uses the minimum of the range then the interest rate charged is at least 145.83 per cent for a period of one month when the loan is transacted just one month before harvest. The interest rate is as high as 328.13 per cent when the loan is transacted four months before harvest. Most of the loans are transacted during the period of August to October therefore, the interest rates charged are very high.[88]

The above calculation is a nominal rate of interest and will be more in real terms, particularly when the cultivator borrows for consumption purposes. In such a situation the cultivator has to borrow paddy which was harvested the previous year. The price of this old paddy, p^{op} will be much higher than the post harvest price. Thus, a unit of old paddy will be equal to (p^{op}/p^{ft}) units of the paddy to be harvested. Hence for every unit of paddy borrowed the cultivator has to pay $[(p^{op}/p^{ft})(p^{ph}/p^{ft})(1.25)]$ units of paddy. It implies that a cultivator who borrows for consumption purposes pays an interest rate which is higher by (p^{op}/p^{ft}). This reiterates the point that when it is a question of subsistence the cultivator cannot but give up the property rights for a larger share of the future produce. Thus, forward trading of paddy clearly brings in the inter-locking of the credit and the product markets.

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[88] The absolute interest rate is more important than the interest rate per month because (i) if the cultivator is given the opportunity between taking loan in August and December he would prefer the latter because in that process he would give away less of the total produce, (ii) if the trader-lender is given an opportunity as above he will choose to lend in August as this would give him the property rights over a higher share of the produce. The above rationale holds for both even when the interest rate per month is higher in December and lower in August.

6.7 Fertilizer Loans and Technological Diffusion

In an earlier analysis it was shown how the trader-lender should have a judicious mix of selling the paddy in the commercial centres and re-investing it. While re-investing he again has to look into the gain as a result of selling provisions and lending. It is immaterial whether the gain comes through trading or lending. The trader-lender can increase his income if the total production increases. This can happen if modern technologies are used. However, the cultivators' inaccessibility to credit is a major constraint which prevents him from using modern technologies.

In such a situation the trader-lender can give loans for production purposes. However, in the absence of a mechanism to monitor that the loans are used for production purposes the trader-lender will be cautious in giving the loans. Now, if there can be a situation where the loans can be given in a tied manner for production purposes. This may increase the trader-lenders' income in three ways (i) as a seller of provisions as the cultivators income may increase and as a result they may have a higher surplus to dispose (ii) his income may increase from increased loan and (iii) by selling more produce in the commercial centres. As (i) mentions it may be a situation where production loans may make the cultivator better off.

In the study region, the trader-lenders have innovated one such mechanism of tied production loans, through fertilizers. The trader-lender buys fertilizers and gives it as loans to the cultivators. The transaction in this loan takes place like any other loan. The fertilizer given as loan has a price and at the

same time there is forward trading price for paddy to be harvested. The transaction takes place in these prices. Using the above prices suppose 1 unit of fertilizer equals 1 *phuti* of paddy then for the cultivator the loan is 1 *phuti* of paddy and he has to pay back 1.25 *phutis* of paddy. We have collected the amount of fertilizer loans in *phuti* terms. The total amount of loans to be repaid is given in Table 6.7.

Table 6.7 Caste-wise Distribution of Total Product and Loans to be Repaid in Paddy. (in *phutis*)

Caste (1)	Product (2)	Loan to be paid in Paddy		
		Fertilizer (3)	Other (4)	Total (5)
TFarmer	1917.00	286.36	20.00	306.36
	(100.00)	(14.94)	(1.04)	(15.98)
Tlaborer	438.00	38.75	189.00	222.75
	(100.00)	(7.71)	(43.15)	(50.86)
Domba	268.00	17.78	60.44	88.18
	(100.00)	(6.63)	(22.56)	(32.90)
Total	2623.00	337.89	269.44	607.33
	(100.00)	(12.88)	(10.27)	(23.15)

Note: Figures in the parentheses show the percentage.
Source: Field survey.

The above figures are blown up for the village. This has been corrected for the extreme observation as was done while calculating the total produce. A tribal farmer had incurred other loans for contesting elections, and hence, is also an extreme observation. This was taken into consideration while blowing up the figure for other loans.

Fertilizer lending constitutes 55.64 per cent of the earning from lending, by the traders. Further, the amount of loan to be repaid in paddy is shown in Table 6.7. It shows that 12.88 per cent of

the total produce is to be paid for fertilizer loans. These, will be higher if the figures for loans are blown up. The reason being the outliers, discussed earlier, do not take fertilizer as loan but buy it from the trader-lender. The amount of paddy to be paid as loan for other purposes is 10.27 per cent of the total produce. Thus, 23.15 per cent of the total produce is repaid as loan.

The loan for fertilizer is like a tied loan and leads to inter-locking of fertilizer (input) and paddy (product) market.

When the cultivator takes the fertilizer as loan then he transacts at the prices offered by the trader-lender during forward trading. Thus, the cultivator is preempted from operating in certain markets.

In one situation the cultivator could have directly transacted with the trader-lender. He could pay 110 rupees in cash and buy 1 unit of fertilizer. Similarly, he can sell the paddy and take 215 rupees[89]. The above prices are quoted by the trader-lender. If we use these prices as a measure then the trader-lender charges 244.32 per cent of interest per unit of fertilizer. However, the cultivator is preempted from operating with the trader directly because of inaccessibility to credit.

In a second situation the cultivator could have obtained fertilizer from the Agricultural Office at Gunupur and disposed the paddy at

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[89] The price for the paddy offered by the trader after the harvest is within the range of 210-220 rupees. We have taken the average.

the Gunupur market. However, the cultivator is preempted from operating in the above market because of inaccessibility to credit and lack of communication facilities. The two situations are given in Table 6.8.

Table 6.8 Interest rate Charged from the Cultivators using Prices Offered by the Trader-fertilizer Lender and Prices in Gunupur. (in Rupees)

Alternative Prices	Total qty. of Fert. given as losn	Price of Fert.	Amount of Fert. given as loan	Total qty of Paddy to be paid as loan (*Phutis*)	Price of Paddy	Amount of Paddy to be paid as loan	Interest Rate
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
TFL's Pr	83.00	110.00	9130.00	103.75	215.00	22306.25	244.32
Govt. Pr	83.00	100.00	8300.00	103.75	230.00	23862.50	287.50
Abs. Difference		10.00	830.00	-	15.00	1556.25	43.18

Source: 1) District Agriculture Office, Gunupur.
2) Field survey.

It is observed that the fertilizer price is higher and the paddy price lower in the village. This differential in the price is due to transaction costs. However, in a situation of asymmetric information, it is more likely that the transaction cost charged by the trader-lender is equal to the cultivators' transaction cost.[90]

The above analysis shows how even in the presence of inter-locking of factor and product markets there has been the use of modern technologies. In fact the inter-locking of the markets has led to the use of modern technologies. This can be explained as follows.

[90] The cultivators, transaction cost is higher than the trader-lender because of the scale of operation and other socio-economic constraints.

The use of fertilizers will certainly increase the level of production. However, if fertilizers are used once, then they have to be used regularly, otherwise production will be less than its initial level when fertilizers were not used. Further, the need for fertilizers keeps on increasing. This information is known to the trader-lender. Thus, in the successive years the need for fertilizers will increase and the cultivator will be willing to give up more and more of the produce. Thus, one can say that the use of the technology (particularly fertilizers) is again because of asymmetric information and absence of perfect foresight.

It has already been mentioned that the use of modern technologies have percolated down even in the presence of inter-locking of factor markets. Now let us analyse the level of penetration of the modern technologies.

Table 6.9 Diffusion of Technology.

Percentage of cultivators using			Percentage of Paddy land using		
HYV Seeds (1)	Fertilizers (2)	Tractors (3)	HYV Seeds (4)	Fertilizers (5)	Tractors (6)
100.00	92.31	3.84	100.00	89.01	7.69

Note: Tractors were used because ploughing was delayed.
Source: Field Survey.

Table 6.9 shows that the use of HYV seeds is more or less complete[91]. Further, it also shows that nearly 90 per cent of the land and well over 92 per cent of the farmers are using

[91] It may be mentioned that the implementation of HYV seeds is a costly affair only in the initial stages.

fertilizers. However, only 7.69 per cent of the paddy land was ploughed using tractors. This confirms the point that agricultural production is not stagnant.[92]

Though the above transaction increases the production the nature of operations of the trader-lender is still rent-seeking. In fact a larger share of the increased production goes to the trader-lender. Further these transactions are strengthened because of lack of infra-structural facilities and governmental intervention. Proper infra-structural facilities could have led to the trader-lender diversifying their investment in more productive areas.

6.8 Paddy in Exchange for Money

So far, the traders' role both as a seller of provisions and as lender have been dealt with. However, his role as a buyer is yet to be seen. Though the trader buys paddy while selling provisions (through barter) or lending (through forward trading), he also buys paddy from the cultivator by paying money.[93] An estimate of the paddy sold by the cultivators is given in Table 6.10.

The cultivators sell paddy whenever they need money[94] but, the figures for the smaller transactions is absent. However, the figures for the paddy sold in large quantities are available.

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[92] The proportion of land under share-cropping is very minimal in the study region.

[93] This may be used by the cultivator for other consumption purposes such as clothing, education or even for repayment of formal credit loans.

[94] They may also sell other items such as fowls, goats or bullocks in the weekly market at Bhamini when they need money. Bhamini is situated on the banks of Baunsadhara.

Thus, these figures are likely to be underestimates. Now, let us blow up the figures for the village.[95]

The total paddy sold is given below in Table 6.10.

Table 6.10 The Amount of Paddy Sold. (in *phutis*)

Caste (1)	Blown up (2)	Extreme Observations (3)	Total (4)	Percentage to Total Produce (5)
Tribal farmer	225.00 (81.81)	50.00 (18.18)	275.00 (100.00)	10.55
Tribal labourer	-	-	-	-
Dombas		60.00 (100.00)	60.00 (100.00)	2.30
All Castes	225.00 (67.16)	110.00 (32.84)	335.00 (100.00)	12.85

Note: Only households who have more than 4 acres of cultivated paddy land have sold paddy in large quantities. Figures in the parentheses indicate percentages.
Source: Field Survey

From the above it is realised that 12.85 per cent of the produce is sold by the cultivators.

The traders have three functions. They are, to sell provisions to the villagers, provide loans for consumption and production purposes and to buy paddy. A trader earns 22.42 to 33.28 per cent of the paddy produced in the village by selling provisions. He gets the property right over 23.15 percent of the produce by lending. Finally, he takes 12.85 per cent of the paddy harvested by buying. Thus, it can be deduced that 59.42 to 69.28 per cent of

[95] Necessary corrections were made before blowing up the figures.

the produce comes into the possession of the trader.

6.9 The Grain Drain

Now, what is the amount of paddy that goes outside the region ? No accurate figures are available in this regard. However we can give an approximate figure as this would be the amount of paddy that the trader-lender gets ownership less the paddy he directly invests in this region. Here again, the figures are arrived at by certain calculations using backward induction.

First, let us assume that the amount of other loan, in Table 7, to be paid in paddy, is because of the direct investment by the trader for consumption and production purposes.[96] The above figures are what the trader-lender gets. We want the figures for what the trader lender re-cycles back in the form of paddy.

During the loan transaction forward trading takes place and further for every unit of paddy traded the trader-lender will receive 1.25 units of paddy. The total paddy to be received is 100 *phutis*. If 100 units is the paddy to be received then it can be calculated that 80 units of the paddy to be harvested was transacted.

The above transaction was a forward trading between the paddy that was harvested the previous year and the paddy that is to be harvested. The explanation has been given earlier regarding the higher prices for the former and lower price for the latter. An

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[96] This will be an overestimate because the trader-lender also give loan in money terms. Again, the cultivator could have taken the loan in previous years.

estimate of the paddy that was given as loan which was harvested the previous year is possible. This depends upon the prices prevailing during the time of transaction. However, neither the information on prices (as the transaction takes place over a period of time) nor the scale of operation is available. So to calculate the maximum forward trading price of the paddy to be harvested (Rs 150 per *phuti*) and the minimum price for the paddy harvested (Rs 210 per *phuti*) are used. Thus, we multiply 80 with (150/210), which is 154 *phutis*.[97] This is the estimate for the paddy re-cycled by our trader-lender which is 5.87 per cent of the produce.

The above figure is subtracted from the amount of paddy that is in the ownership of the trader-lender. The figures then are in a range, that is, 52.14 to 64.38 per cent. Thus, it can be argued that at least 52.14 per cent of the produce goes out of the region.

While estimating the figures for the population from a sample one has to be cautious. It is for this reason that the ownership of the trader was underestimated and the amount of paddy re-cycled was overestimated. In spite of this it is possible to tell conclusively that there was **grain drain** from this region.

6.10 Conclusion

In the above analysis it was seen that the traders, as a seller of provisions and other commodities for daily consumption, have a

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[97] Such calculation will again lead to overestimation. Firstly the forward trading price is even lower. Secondly, the price of paddy harvested is much higher. Thirdly, the transaction takes place mostly in August-September when the former price is 75 to 80 rupees and the latter price is around 270 rupees.

higher bargaining power over the cultivators. Further, it was seen that the trader's rationale lies not only in maximizing his present income but also in ensuring a steady source of income in the coming years. It is for this reason that the trader lends for consumption and production purposes. In the above process the cultivator forgoes the property rights for a larger share of the produce and more so when the loan is for consumption purposes. The mode of loan payment through forward trading of paddy has lead to inter-locking of product and factor markets. However, this interaction instead of leading to stagnant agricultural production has led to the use of modern technologies.[98] The increasing use of fertilizers has undoubtedly increased the produce. However, most of the grain not only passes into the hands of the trader-lender but it also goes out of this region, that is, there is a grain drain from this region.

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[98] The term modern technology is used as against stagnation.

Chapter 7

Conclusion

The Year 1993 has been declared by United Nations as the year of the indigenous peoples. Both in the academic and non-academic circles the topic has come to acquire some importance. It is in this background that the present study is carried out. It is essentially a case study of a tribal village in the Koraput district of Orissa.

An attempt has been made to examine how social interactions, particularly exchange relationships get redefined, in a tribal economy, over a period of time. To analyse the same, an analytical framework was developed which put forth the various possible ways in which social or economic hierarchy can be redefined. Based on mathematical induction as well as considerations of social reality it was said that certain sections of the society, which may have advantages (such as superior knowledge, easy accessibility to information and the like) because of historically determined factors, are more likely to remain at a higher level in successive periods.

Keeping the above framework in the background an attempt has been made to:

(1) explain the emergence and persistence of particular kind of exchange relationships in a long term perspective,

(2) evaluate the impact of these exchange relationships on the nature and distribution of production, and

(3) assess whether social and economic hierarchy has been maintained or altered within and across the two time-frames, that is, historical and contemporary periods.

During the colonial period it was seen that the penetration of British interests along with the construction of Roads and Railways opened up the earlier inaccessible regions to people from the plains. This induced a large scale immigration of non-tribals to this region, which had intensified the interaction between the tribals and non-tribals. Further, the mode of operation of these non-tribals (such as high interest rate coupled with forward trading and *gadam)*, along with certain governmental policies (like the payment of fines for violating forest laws and ban on production and consumption of indigenous liquor) led to inter-locking of credit with land and labour markets. In the process, the tribals had not only lost their lands, but also ended up as bonded labourers.

It was observed that the non-tribals had acquired property rights over land as well as labour. As a corollary, they got ownership over a larger share of the produce. Hence, it may be said that in course of time, the conditions of tribals became worse off and that of non-tribals better off.

The analysis of contemporary period was largely drawn from the village surveyed. The village was stratified into *tribal farmers,*

tribal labourers, *dombas* (who are lower than the tribals in the social hierarchy and are basically labourers), and *Komatis* (a Telugu speaking trading community). The exchange relationships among the above strata were examined in terms of interactions between labourers and cultivators, and traders and cultivators. To analyse the former interaction a framework based on "demand for and supply of labour" was developed. As per the framework social, economic and physical considerations determined, the average family labour of a particular household. As expected, the landless households and those with small sized holdings had surplus and those with large size holdings had deficient average family labour.

Amongst *tribal farmers*, *tribal labourers* and *dombas*, the *tribal farmers* have relatively large sized holdings. Second, though some *tribal labourers* were landless yet on an average they had more land as compared to the *dombas*. The *dombas* were either landless or on an average, owned an acre of Paddy land each. The iniquitous distribution of land was reflected within castes. This is more so in the case of *tribal farmers*. As a corollary, the distribution in the village is more iniquitous, than within any particular caste.

Furthermore, the differences in the size of land holding and average family labour brought about different contractual arrangements. The households with small holdings and low family labour entered into exchange labour contracts. Again, this contract was largely confined among households with equal size holdings and family labour.

As against this, the large size holdings depend to a large extent

on hired labour, and the family labour they provide is more to supervise or monitor hired labourers. To reduce search costs as well as to ensure a minimum supply of labour, these households may employ *Khamaris* (Annual farm servants). However, because of increasing non-agricultural employment in lean season and greater co-operation among labourers, this system has given way to *guta* (Group labour). The emergence of *guta* has also brought down individual labour contracts.

Further, the *guta* system has also led to an increase in the real wages of the labourers. Though the increase in real wages was spent on alcohol consumption in some households, yet one can say that the Quality-of-Life of the labourers on the whole has increased.

However, to know the changes in the Quality-of-Life of cultivators, one should be aware of the trends in production and the exact nature of its distribution. This may be explained by the exchange relationships between traders and cultivators.

In one situation the cultivators (as well as labourers) more or less depend upon the traders for provisions and other commodities for daily consumption. In this transaction, the absence of a price or quantity co-ordination among the *Komatis*, and the segmented nature of the market shows that the trader commands a higher bargaining power. Further, these transactions are largely in the form of barter and the major mode of payment by the buyers was through paddy. Then again, a large part of the above transaction takes place after harvest, when the value of paddy vis-a-vis other

commodities is lower.

Now, the trader can store the paddy and reap the benefits by releasing the paddy at a higher price, either by giving a loan for consumption and production purposes, or by selling in commercial centres. The traders' behaviour is a judicious mix of the two, which not only maximizes his present income but also ensures a steady source of income in the coming years.

The cultivator, while taking loans from the trader-lender enters into a forward trading contract for the paddy to be harvested. Here the asymmetric information and cultivators' inaccessibility to credit makes the cultivator accept the trader-lenders' offer. In this process, the former foregoes the property rights for a larger share of the future produce, and more so when the loan is for consumption purposes. The above interaction also clearly shows the inter-locking of credit and product markets.

In the inter-locking of markets, the trader-lenders have also developed a method of giving tied fertilizer loans, which not only ensure higher production, but also increase the cultivators' dependence on the trader-lender in the successive periods. Thus, one can say that the above activity of the trader-lender is more rent-seeking than productive. This may be ascribed to some extent, to the lack of infra-structural facilities which otherwise would have facilitated the trader-lenders to diversify their interests in more productive areas.

The method of giving tied fertilizer loans has emerged in the

region seven to eight years ago. This not only increases the trader-lenders' income but, may also increase the cultivators' income. However, in the process the small size holdings may be affected as these farmers start mortgaging or selling land. Further, the trader-lender may acquire the property rights over land either unofficially or through the manipulation of government records.

Thus, it is seen that the traders accrue a larger share of the increase in production. On the other hand, some cultivators have benefitted while others have not. It is more likely that the latter would be from among the households with small size holdings. However, this would also depend upon the family size, other sources of income of the household and various other factors. This is an interesting aspect, that merits a deeper study.

Another aspect which may be looked into is the institutional factors behind the *Komatis'* behaviour. One such institution is the prevalence of high dowry among them. Though its emergence might have been due to certain social interactions prevailing in the past, its prevalence may effect the social interactions of the latter period as well.

Again, after independence, various legislations and governmental interventions brought about changes in the nature of interactions. Though, the dynamics of the process of the last forty to fifty years could not be analysed here, however the analysis does show how the exchange relationships have evolved to the greater advantage of the non-tribals.

A remarkable outcome of the above interactions has been the large scale **grain drain** from this region. The evolution of social-interactions both in the historical as well as in the contemporary period has facilitated this process. Though the above outcome is because of the fact that this study is about an agrarian economy, yet it shows that the outflow from the hilly inland regions need not be forest produce and natural resources alone. It can even be a basic commodity like foodgrain. However, whether this phenomenon is also true for other inland regions is something which is beyond the scope of the present study. Further, **grain drain** may also explain to some extent, the persisting backwardness not only of the tribals but of the region as well.

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