Chapter - 2:

REVIEW OF LITERATURE
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2.1. THEORETICAL FRAMEWORK ON LAND TENANCY CONTRACT

2.1.1 FACTOR MARKET IMPERFECTION ON TENANCY CONTRACT

Several theoretical and empirical arguments are provided to explain the existence and variation of tenancy in general and sharecropping in particular. If there are perfect markets for other factors of production, those factors can be hired by landowners until factors of production can equal marginal products by all land owners, resulting in production efficiency (Newbery; 1975, Newbery; 1977; Binswanger and Rosenzweig, 1984). Tenancy is thus not necessary unless there is some other market imperfection in addition to a missing or poorly functioning sales market. Several kinds of market imperfections have been considered in the literature on land tenure contracts in developing countries about the existence and type of tenure contracts that arise.

Among these are missing insurance markets, unobservable or costly monitoring of labour effort, asymmetrical information about labour quality, transaction costs of monitoring treatment of leased land or other capital goods, indivisibilities and non-tradability of other productive inputs and capital market imperfections (Johnson, 1950; Cheung, 1969; Stiglitz, 1974). In the presence of production risk households can use share contracts to achieve perfect risk pooling and productive efficiency, provided that the intensity of labour effort can be costlessly monitored and enforced.
Cheung thus takes risk pooling as an argument for the existence of share cropping. Share cropping contracts arise because of the benefits of risk sharing between risk averse contracting parties. Cheung (1969), has postulated that the choice of contract is determined by weighing the gains from risk dispersion against losses due to higher transaction costs. The share cropping contracts offers the advantage of risk sharing while fixed rent contract involves lower transaction costs. But the argument that risk sharing is the main motivation behind share cropping lacks empirical support (Pant, 1980; Rao, 1971).

One of the most commonly cited argument for share cropping to exist is the difficulty of monitoring labour effort. If labour is unobservable or costly to monitor, share cropping may dominate labour hiring because of its incentive advantages and dominate fixed rental because of its risk pooling advantage (Stiglitz, 1974). Risk sharing is not alone sufficient to explain the existence of share cropping. It is the risk sharing coupled with incentive effects that explain the existence of share cropping. The co-existence of different kinds of lease is explained by the return to scale of the supervision cost. Newbery (1977), pointed out that neither the existence of risk nor the provisions of incentive are sufficient to explain the existence of share cropping. He maintained existence of share cropping offers additional risk sharing advantage. Share cropping exists to absorb the risk feature of the labour market. Stiglitz and Braverman (1986) mentioned that share cropping exists because of imperfect information; the level of inputs of labour is not monitorable, at least not without cost. Cost share also exists due to imperfect information, the optimal input amount is seldom known to
the landlords which, in turn, changes in response to variation in weather, soil fertility, etc.

Reid (1973), studied the phenomenon of share cropping in Post Bellum South America and found that the cost of negotiating and enforcing share contracts in the post-bellum South and Lowa was significantly and the southern landowners closely mentioned their tenant work. Similarly, Winters (1974), points out that the Lowa landowners instead that they should be able to enter upon said lands at all reasonable hours for purpose of examining the same and manner in which the said farm was being attended obviously with the intention of monitoring tenants labour inputs. Thus, Reid (1973 and 1976), as well as Stiglitz (1974), have found that under constant returns to scale, both wage cultivation and fixed rent system also disperse risk as is done by share cropping does. Given the highest transaction cost of share cropping, the system will never exist. According to him, rationals for existence of share cropping lies, therefore, both in its incentive effect and risk sharing effect. Share cropping exist because of its transaction cost is lower and the choice of tenure depends on the availability of managerial time of the landlord (Reid, 1973 and 1976).

However, it is possible that the landlord may be so well off and the marginal income derived from supervising the tenant is so small that marginal utility of leisure schedule lies above the downward slopping marginal income schedule of the landlord. Under such circumstances, the landlord will leave the tenant to work at the previous schedule or without supervising the tenants land. Supervision costs would no doubt be higher under wage contract since all labour must be supervised as compared to
share contract. The supervision costs under fixed rent would result from the need to ensure soil fertility and to see that farm equipment another properties are properly maintained. However, negotiation costs would undoubtedly be lower under wage contract and fixed rental rates. Such supervision costs represent an economic waste in the sense that by altering property rights arrangements the same output could be obtained without employing scarce resources for policing purposes. The resource employed for supervision purposes under wage share and rental contracts represent 'potential surplus labour' which would become redundant in the agricultural sector of land redistribution to the tiller was undertaken. Assuming thus inefficiency of share cropping Bell (1976), went to explain the reason for choosing the alternative forms of lease market in agriculture. He raised the question that why there should be cost sharing in share cropping if the landlord can contractually stipulate and enforce the tenant input intensities.

Moreover, the empirical evidence from Belle’s study indicates that it is the share tenants with some owned land who conformed more to neoclassical calculation of marginal returns than to the classical ‘whip of hunger’. Therefore, policy prescriptions to increase agricultural productivity on tenanted farms must take cognizance of the heterogeneity in tenant behaviour. Blanket regulatory measures can give rise to perverse effect.

Equal efficiency school’s (Ahmed, 1974; Vray, 1963; Hendry, 1960 and Ruttam, 1966) stand has been shifted from an unconditional efficiency or constrained efficiency i.e. Imperfection in the factor market has crept into
explain the existence of share cropping. Specially the equal efficiency school neglects the implication of intersectoral linkages and interactions for efficient resource allocation. Moreover, the assumption of perfect competition of most models also fact implies that the existing land tenure arrangement will be equal efficient.

Ip and Stall (1978), have shown that if land reforms are undertaken, then a considerable amount of transaction costs could be saved and the economy will get released additional entrepreneurs for its development. In the pure theory of share tenancy, Cheung (1968), has however, shown that the landlord will stipulate and tenant will agree to work for longer but in reality the tenant has little incentive to work. Therefore, to ensure that tenant puts in honest hour of work, the landlord has to supervise the work of tenant. In addition to this, the landlord has to incur negotiation costs. Let both these costs together be called “transaction costs”. As argued by Alchian and Demisitz (1977), competition among workers does not remove the incentive by workers to shirk if their managerial receipts are less than their marginal product. The landlord may sack an inefficient tenant in which case he has to incur negotiation costs of searching for new tenants who also have similar tendency of shirk labour beyond a certain point of production. Thus, new variety of enforcement cost become important even within a competitive environment (Winters, 1974). Warriner (1969) and Yang (1970) have pointed out that elimination of costs of enforcing contractual relationship may also serve to increase agricultural outputs as has occurred in Taiwan, Japan and parts of Africa and Latin America.
Furthermore, the empirical studies which support the equal efficiency school may be of limited value as an attempt to resolve the comparative efficiency debate since they failed to take into account the net impact of transaction costs and differential risk reactions of cultivators under alternative forms of land tenure.

The equal efficiency school's latest argument is that a competitive system with sharecropping is constrained pareto optimum. Even most of the theorem on this result attained with the dubious assumption of costless enforceability of the stipulated labour intensity in sharecropping. Secondly, if land has to be rationed, both agents are placed in a bargaining situation. Bell and Zusman (1976, 1977 and 1978), in an attempt put forward the determination of share rent under sharecropping by a bargaining theoretic approach. They have provided a very interesting series of papers applying game theory to the share contracts. In particular, they provide a discussion and some calculations, of the shares which are likely to emerge in (a game theoretic) equilibrium. Mishra (1971), has examined the nature of tenurial relationship between tenure characteristic and fertilizer use in Indian agriculture. His observation is that sharecropping arrangement encourages tenants to use higher levels of fertilizer because under this system the cost of fertilizers is shared both by the tenant and the landlord. The cost of the owner cultivator to shift out of agriculture to find work in industry is likely to be higher than that of the land-less worker or sharecroppers. The farmer's opportunity cost can be expected to be greater than that of the latter due to the premium awarded to those capable of more complex decision making.
It has been found that the more labour intensive the crop and the more are the diseconomies of scale due to supervision problems, the more is the advantage in leasing out the land to small farmer. If there is a lot of unemployment and under-employment afflicting the landless and farmer's families at the going wage rate, there will be an incentive on the part of large-landowners to lease out land to the small farmers and also for the latter to lease in from the former. Of course, this process involves shifting of production risks to cultivators with lower risk bearing capacity and obviously, this is likely to be more acceptable to the small farmers in areas where production risks are relatively low and where the alternative of wage employment is even more uncertain.

An alternative explanation of tenancy has been provided by the theory of agricultural ladder, also known as the screening model of tenancy (Spillman, 1919). This theory suggests the importance of human capital formation as a determinant of ones lifetime earnings profile. Hallagon (1978), has also used screening models to explain the existence of different contracts. Some studies have pointed out technical know-how (Reid, 1976), managerial ability (Bell and Zusman, 1976, 1977 and 1978), bullocks (Bliss and Stern, 1982), Credit (Jayne, 1982) and family labour (Pant, 1983), Education of farmers (Kuri, 2003), as examples of factors for which markets are highly imperfect. An effective way of gaining access to such a factor is to offer a self-monitoring contract to the owner of that factor involving him in the production process. In rural areas, labour markets often suffer from dualism (Majumdar, 1975). Market for bullock services sometimes does not exist; and this makes it difficult to adjust the availability of this input to production requirement. Bell (1976), first provided the rationale for land
leasing considering the input indivisibility and non-existence of a market for bullock power. If there are surplus bullocks of a family compared to the endowment of land, it leases in land because it is risky to lease out the surplus bullock. Conversely, households with more land in relation to their ownership of bullocks would lease out their surplus land. Bliss and Stern (1982), using an econometric model and testing this with Indian data have argued that leasing decisions are closely related to the existence of owned bullock power, family workers and land endowment of the rural households. He opined that tenancy is an adjustment between desired cultivated area and owned land through available bullock capacity and family labour. Nabi (1985), substantiated the views of Bliss and Stern (1982), and provided empirical support with Pakistani data. Taslim and Ahmed (1992), tried to overcome the adjustment difficulties of the model of Bliss and Stern (1982) by incorporating a partial adjustment mechanism into the leasing model; and then tested it with Bangladeshi data. Pant (1989), analysed the role of family resources particularly the families managerial skills, endowment of human labour and draft animal power in determining the extent of tenancy. He derived the result that the family with a larger worker per unit of owned land would lease in more land; and the extent of ownership of bullocks has a positive influence on the extent of land leasing.

The explanations grounded in factor market imperfections seem to be relevant to explain tenancy in our study area. In this backdrop, we like to examine the role of family resources (endowment of land, labour and bullock power) and human capital formation (education of the farmer) in determining the extent of tenancy in our study area within a theoretical frame work. In the present study Bliss & Stern (1982) model has been used
with inclusion of some more variable which are relevant in the context of Barak Valley region of Assam.

2.1.2 INTERLINKING CREDIT AND TENANCY CONTRACT

There has been another spurt of literature on the issue of the effect of interlinked credit on incentives to innovate in agriculture under share cropping. The pioneering work in this regard has been done by Bhadhuri (1973). The phenomenon of interlinking credit and tenancy contract, according to him, should be an obstacle to the technological innovations.

In the literature on rural credit, an important distinction is made between the institutional and informal sources of credit. It is widely believed that as the economy develops, institutional sources of credit generally replace the informal sources. In fact, indebtedness to informal sources is considered to be an indicator of backwardness (Bhaduri, 1983; Prasad, 1979). Evidence suggests that the access to institutional credit in backward agriculture is directly related to the land ownership patterns. While the bigger landowners have, by and large, been able to monopolise the institutional sources, the pity tenant and landless labourers have continued to depend upon the informal sources of credit indicating their poor participation in the process of agricultural development (Kuri, 2003).

Share cropping contracts are quite often interlinked with credit contracts (Bharadwaj, 1974; Bardhan, 1984; Binswanger, et. al, 1984; Bell and Srinivasan, 1985). Credit contracts between landlords and tenants are often made in the form of consumption of production loans. The production loans are, in general tied to the purchase of fertilizer, seeds and other forms
of capital (Singh, 1984; Braverman and Stiglitz, 1985). Different tenants pay
different interest rates on their loans (Bardhan and Rudra, 1978).

On the issue of interlinkage between tenancy and credit markets in
backward agricultural economies there is a school of thought which asserts
that the institution of share cropping and interlinked informal credit
transactions allows the landlords to extract maximum surplus (rental and
usurious) which results in the perpetual indebtedness of the tenants
(Bhaduri, 1973 and 1977; Ghatak, 1976; Scandizzo, 1979; Prasad, 1973;
Chandra, 1974 etc.)

In Bhaduri’s model the semi feudal landowner derives his income
both from property right to land and usury. That is the landowner has two
sources of income; (i) the rental income that he gets from the leased out
land, and (ii) the interest that he charges for the loan advanced to tenants. If
the landowner adopts technological innovation, the productivity will
increase and consequently the crop income of the tenant will increase in
absolute amount even if the share remains the same. Therefore, the tenant
will borrow less to meet his consumption needs and the landowner will
suffer losses in interest income. Therefore, the landlord will be discouraged
from introducing any technological improvement so long as his gain in
rental income from increased productivity brought by technological change
falls short of his loss in income from usury due to a reduction in the level of
consumption loan required by the farmer. Innovations, therefore,
accordingly to Bhadhuri make tenants better off, reduce their demand for
credit and this makes landlords worse off.
Bhadhuri's hypotheses has been questioned by a number of studies. Srinivasan (1979), using Bhadhuri's model has argued against the contention that innovations lead to lower demand for credit. Bravermen and Stigltiz (1982) have presented a general analysis of interlinked markets characterizes by uncertainty and asymmetrical distribution of information between agents which rise to "moral hazard problem". Tenants have some discretions over his effort and choice of production technique and that his behaviour can effect the returns to the landlord. In this situation, the landlord has an incentive to induce tenants to behaves as he wishes. This is done by altering the terms of loans so that tenants not only borrow more and work harder but also undertake projects which are more to the landlords liking. It has been further pointed out that loans may create both positive and negative externalities. In the event of negative externalities getting increase, tenant's borrowings reduces the landlord's expected earning so that he would like to restrict the amount of tenant's borrowings by offering a given amount at a favourable interest rate. In case of positive externalities, however, landlord, may like to subsidize the loan to encourage the tenant to become indebted to him so that he works harder to repay loan. However, where the tenant borrows from the professional money lenders, externalities exist between the actions of the landlord and those of the money lenders. Terms of contract with the landlord determines probability of default in repayment of loans advanced by the money lenders while the extent of indebtedness determines the expected earning of the landlord. Thus, whatever such externalities exist, a natural situation is to internalize the externality which is done by interlinking two markets. Therefore, both competitive and monopoly markets would be characterized
by interlocking of markets. Braverman and Stiglitz (1986) have shown that there is no presumption that innovation results either in reduction or in an increase in tenant's demand for credit. The presence of interlinkages between credit and land markets does not preclude either resistance to or encouragement of the adoption of technological innovations. Braverman and Srinivasan (1981), show that preventing landlords from providing credit to tenants does not affect welfare of tenants. This due to the fact that in their model landlords can control effort levels by varying the size of the plot given to a tenant. Ghosh and Smith (1976); Mitra (1982), Pant (1980); Gangopadhyaya and Sengupta (1986), Griffin (1974) and Newberry (1975) believe that land and credit transportations are primarily interlinked and tenancy acts as a direct or indirect cause or effect of credit transactions. They refute the involuntary and exploitative nature of the interlinkages phenomenon. One rational for interlikage is the adverse selection effect, where interlinking credit and tenancy contract may screen out the high ability workers from low ability type (Braverman and Guasch, 1984). The most powerful criticism of Bhadhuri's model comes from Bardhan and Rudra (1980). In a comprehensive empirical survey, Bardhan and Rudra find that landlords take keen interest in investment on their tenants land and share in the cost of new inputs so as to encourage tenants to use them. Rejecting the semi-feudal argument, the same study concludes, "our survey results ..... suggests that the institution of share cropping as it has been evolving in India does not at all conform to the stereotype of landlord-serf relationship. On the contrary ..... the institution has been adopting itself more and more to the needs of increasing production and profit by enterprising farmers, with owners and tenants" (Rudra, 1975). Considerable
amount of evidence has put forward to show that the institution of land tenancy “has been adopting itself more and more to the needs of increasing production and profit by enterprising farmers, both owners and tenants” (Bardhan and Rudra, 1978; p. 354 and Ghosh 1984; p. 107). Evidence shows that landlords do in fact often share costs, perform managerial and technical intermediary functions, extend credit and easy terms to tenants and thus contribute to technological transformation on farms. Much depends upon the nature of patron-client relationships. It is also argued that there is no justification in characterizing tenancy necessarily and integrally as signifying pre-capitalist relations of production, where extra-economic coercion is the rule (Rudra, 1978; Chakraborty, 1981).

Moreover, to meet some empirical challenges more theories emerged (Basu, 1983; 1984; Gangopadhyya and Sengupta, 1987), some of which tried to model the determination of interest rates and collateral prices simultaneously. However, in the study of rural credit some of the most instructive work has been in the empirical field, in particular the micro-empirical studies like those of Nagaraj (1985), Sarap (1991), and Swaminathan (1991). This vast empirical literature has thrown into disuse many standard analytical constructs.

Though numerous studies have been carried out both at theoretical and empirical level to highlight interlinked credit transactions under share cropping, no such empirical study has yet been undertaken in the state of Assam as a whole and Barak Valley in particular, where tenancy is widespread and informal credit plays a dominant role interlinking various factor markets. In this back-drop, this research study is an attempt to
explore the terms and conditions of credit transactions and associated interlinkages in backwardness agriculture in rural Barak Valley of Assam.

2.1.3 ‘FORM’ AND ‘PATTERN’ OF SHARE CONTRACT

Along side the decline in the significance of the institution of land tenancy, the ‘form’ of tenancy; that is, the relative importance of share cropping, fixed kind rent, and cash rent, has been witnessing a change over the years. Further, the pattern of tenancy; meaning the composition of the tenant participants in the land lease market has also been changing (NSS and Census Data, GOI).

Let us first consider the form of share contract. Valuable historical studies of land tenure in India which bear on the form of rental systems have been contributed by Etienne (1968), Neale (1962), and Sayana (1949). The system of sharing of output has existed in India for a very long time. Etienne Writes, “Originally the English were baffled by the Indian way of land ownership since in no way did it resemble the European system. It was based on two principles; the first man to bring land into cultivation had prior claim to part of its produce; those who had conquered the country also had a right to part of it. In fact, the harvest was divided among the grower, the sovereign and the workers who gave their services to the growers, the blacksmith, the carpenter, the sweeper, the barber”. Neale quotes from an 1878 study of Gonda by Bennett which describes in detail the rules for sharing amongst different interested parties. Neale writes that the gross product was never evaluated and payments were always in terms of a share.
Sayana (1949), surveyed sharing systems that existed in India and Pakistan at that time and compared them with those of other countries. In Pakistan 'batai' usually meant equal proportions minus 'customary deductions' which varied widely. In Sind the share of the landlord was one-third for lift-irrigated crops and one-half for flow-irrigated crops. If the landlord supplied bullocks and seed his share was 'much larger'. In Bihar and Bengal crop sharing was widespread - the proportion of the cultivated area was, around 20 percent and increasing. In Bengal half-shares were common with two-third shares to the landlord on cash crops. Landlords supplied cattle, a plough, and seed, and took half the straw. Landlords also supplied rice for home consumption and took 50 percent interest on this in grain at harvest. In Bihar, shares varied from $1/2 : 1/2$ to 9:7 (landlord : tenant).

Bell (1975), in his own study of Purnea district in Bihar, has found the 50-50 share to be still very common. Ladejinsky (1977), on the other hand, has found that in the so called 'Green Revolution' areas of Punjab and Haryana, “The first consequence of rising land values is that rents have risen above the traditional 50-50 share of the crop”. He states, ‘As a Consequences (of the rise in land values) not only have rents risen to as high as 70 percent of the crop in some places but security of tenure and other rights in land the tenant might claim are in jeopardy now.’ The form of tenancy and the basis of its determination has been the subject of considerable empirical research in India (Rudra, 1975; Reddy and Murty, 1976, Murty 1987; Bhaumik 1993; Dwivedi and Rudra 1973; Sharma and Dreiz 1996; Bhalla 1983; Chakravarty and Rudra 1973; Bharadwaj and Das 1975; Khasnobis and Chakravarty 1982; Hunter 1982; Guha 1991;
Chakravarty 1995; Gautam 1995). Most of the studies seem to be several types of tenancy contract co-exist. The most important and widely used practices among them are share cropping and fixed rent tenancy. Though there is a wide variation in shares in costs and agreement over levels for inputs, 50:50 share is quite common (and embodied in French word for share cropping ‘metayage’). Vyas (1970), on the other hand examines the changes in the form and pattern of tenancy in India over time. He observes that while tenancy by and large has actually declined over time in India its form has already undergone change such that the bigger sizes of farms have shown increasing percentage of area leased in as against the smaller size of farms having a greater percentage of leased in area as observed earlier. Laxminarayan and Tyagi (1977), have examined the interstate variations in the types of tenancy in India and have observed that the form and pattern of tenancy have undergone significant changes over time.

The nature of share cropping contracts has also been undergoing transformation. Increased prevalence of cost sharing, especially of purchased inputs by the landowner, rising rental shares in favour of the landowner and enlarging entrepreneurial decisions by the landlord on behalf of the small share cropper are some of the emerging features (Bardhan, 1976). Again, incidence of leasing in land among the smaller tenants is more in areas where productive risks are low. In this connection, as to the question of declining trend of smaller farmers in leasing in land, Murty (2004), offers convincing explanations; “because of large farmer bias in the adoption of new agricultural technology in India, the small and petty peasants are not opting out of the lease market in view of the cost lines of new technology. In fact, big farmers have decisive advantages over the
smaller ones in respect of their own capital as well as institutional credit facilities. They, therefore, take more and more direct interest in larger-sized farming. For the purpose, they are not only interested in evicting tenants and starting self cultivation on this land; they are also interested in enlarging the size of operational holding by leasing in land from poor owner cultivators”. The practice of leasing in land from small and marginal cultivators by the big farmers is known as ‘reverse tenancy’ prevailing in different parts of India during the recent decades (Chattopadhyay and Neogi, 2006).

Again, there is no denying the fact that there has been a change in the nature of fixed kind rent and cash rent tenancy contracts, even though such changes are not widely documented in the literature. In this context it may be argued that the land augmenting technological progress has played an important role for this transformation. Agriculture in the majority states of India have developed in terms of irrigation, intensity of cropping and also in land productivity during the current decades. Hence there has been a tendency among the farmers to put the cultivated holdings either on self cultivation or on fixed rent contract for higher return. That means, due to the spread of new agricultural technology in different parts of India, virtual elimination of share cropping cultivation and subsequent replacement of fixed tenant and / or self cultivation are taking place. The farmers in most states of India entered into lease market possibly for cultivating market friendly seasonal crops and in that case the incidence of fixed rent tenancy has gone up (Chattopadhyay and Neogi, 2006).
Divergent explanation have been provided for the co-existence of alternative ‘forms’ of lease arrangements. Cheung (1969), argues that share cropping would be widespread in areas characterized by a high degree of uncertainty because it permits risk sharing between lessors and lessees. On the contrary, Rao (1971), shows that in the Indian context share cropping arrangements are common in areas or relative economic certainty with very little scope for decision making, for example, for factor substitution, and where entrepreneurial profit is low. In areas where there is very little scope for share tenants to restrict the use of inputs, the cost of enforcing tenant’s input would be lower and the incentive for share contracts would be greater. Fixed cash rents, on the other hand, would be found in situations of high uncertainty where scope for decision making is significant or where crops are profitable. Several papers have dealt with the question of existence of share tenancy and fixed rent tenancy in agricultural sector of underdeveloped economy. In India, fixed rent tenancy contract was very uncommon particularly before the introduction of new agricultural technology in the mid-sixties. There are now some evidences of the rise of this system in some areas of India with respect to certain crops. To explain this phenomenon as we may be noticed in the recent writings of some author (Eswaran and Kotwal 1985; Basu 1992; Sengupta 1997; Banerjee, Gertler and Ghatak 2002).

Eswaran and Kotwal (1985), have explained the existence of different tenurial contracts in rural areas in terms of two unmarketed resources viz. ‘management’ and ‘supervision’ possessed by owners and tenants respectively. They have shown different contracts reflect different techniques of combining unmarketed productive units. Share cropping
contract emerges when the landlords provide management and the tenants provide supervision, and the output is shared. In the fixed rental contract, tenants provide both management and supervision and a fixed amount of output is paid to the landlord. In a situation when the factor markets remain underdeveloped and the disparity in managerial abilities between owners and tenants becomes large, the share cropping contract dominates the fixed rent contract.\footnote{1}

Given this, Eswaran and Kotwal (1985) observed in the context of India that the share cropping contract dominates fixed rent contract in such states where the agriculture is backward followed by the highly skewed distribution of land across the size-classes of holdings.

Basu (1992) has highlighted a theoretical result which shows that the presence of “technique moral hazard” combined with limited liability phenomenon explains the existence of share cropping system in agriculture. The explanation suggests that share tenancy will be less predominant in areas where the cultivation is not fully dependent on rainfall. On the contrary, the relatively weather dependent areas, the limited liability seems to be a basic ingredient of many share cropping arrangements in underdeveloped countries like India.

Yet another theoretical exercise carried out by Sengupta (1997). He has examined the question of two types of contractual choices viz. share cropping and fixed rental contracts and shown that ‘technique moral hazard’ is not sufficient to explain the dominance of share contracts over a fixed rent contract. Sengupta has outlined an alternative framework where along with moral hazard in the choice of techniques, suggested by
Basu (1992) moral hazard in the choice of effort by the tenant has been considered. According to Sengupta, moral hazard in effort alone could explain the existence of fixed rent contract while the moral hazard combined with choice of techniques and the choice of efforts could explain the existence of share contract unrestrictedly.

Apart from the above studies, there are some important empirical observations made by some authors in the context of persistence of share tenancy in Indian agriculture: (i) the yields on farms cultivated under share cropping are sometimes found to be higher than on farms alternatively cultivated (Rudra, 1982; Chattopadhyay, 1985; Chattopadhyay and Sengupta 2001), (ii) the greater the production risk, the greater the prevalence of share cropping (Rao, 1971; Pant 1981), (iii) tenancy reform that lead to improved crop shares and higher security of tenure for share tenants can have positive effect on productivity (Banerjee, Gertler and Ghatak, 2002).

It is clear from the above discussion that different authors have argued differently regarding the existence of different tenurial contracts in agriculture. By using major elements of the above discussion it has been helped in drawing some proposition for the present study and tested accordingly on the basis of the field survey data relating to tenancy in land lease market in Barak Valley region of Assam.

2.1.4 PRODUCTIVITY, EFFICIENCY AND SHARE TENANCY

On the issue of land tenancy contract, there has always been controversies on a number of theoretical and empirical issues since the day of Adam Smith (1776). The major debates in this regard have been
concentrated on share cropping efficiency, factor market interlinkages, modes of production, rationale for the persistence of share cropping along with other forms of tenancy, its implication for technological development and so on. The economist belonging to classical, neo-classical and Marxian tradition have contributed profoundly in these debates.

On the issue of share cropping efficiency, the existing literature can be divided into two schools; Marshallian inefficiency school and Johnson - Cheung's efficiency school. Marshall (1890), initiating the debate argues that share cropping is inefficient. The inefficiency arises because the tenant when choosing his variable inputs, particular his labour, will equate some fraction of marginal product with opportunity cost (Smith, 1776; Mill, 1848; Marshall, 1890). In Marshallian model, share tenant taken to be a profit maximized in a competitive market subject to the output shares being fixed in advance. Marshall distinguishes the English system, what we call fixed rent system, and wage cultivation system with share cropping and came to the conclusion that share cropping is more economical than wage cultivation. In wage cultivation, landlord spends an extra sum for supervision of labour which is not required under share cropping. Later economist equated owner cultivation without employment of wage labourers or with employment of wage labour neglecting supervision cost and thus arriving at the conclusion that share cropping is inefficient than wage cultivation (Schicke 1941).

But share cropping is inefficient than owner cultivation or fixed rent cultivation. According to Marshall, "When the cultivator has to give to his landlord half of the return to each dose of capital and labour that he applies
to the land, it will not be to his interest to apply any doses, the total return
to which is less than twice enough to reward him”. Share tenancy is, thus,
according to Marshall, a resource adjustment mechanism between the
labour of the tenant and the land and other implements of the landlord. The
share tenant is less efficient that the owner operator because share tenant
lacks both economic incentive and capability for productive investment
(Bardhan and Srinivasan, 1971, Bell, 1977, 1986; Bliss and Stern, 1982,
Shaban, 1987). The share tenant does not have the incentive to apply
sufficient working capital to achieve maximum output as he receives only a
fraction of the increment in output while he has to bear the full cost
involved in attaining it. The tenant’s equilibrium will be sub-optimal
relative to that of the owner operator as long as the landlord cannot
stipulate input intensity.³

To be more specific, if the output is shared between the tenant and
his landlord in equal ratio, the marginalist theories argued that the tenant
would undertake additional investment only if the marginal return from
such investment is twice as high as the cost associated with the investment.
Share cropping, as along as the share is fixed by convention and the tiller
free to choose the quantum of investment he will supply will, in general, be
less efficient than owner cultivation.

Sen and Varghese (1966), also shared the same view with classicals,
that share cropping leads to inefficient resource allocation. The tenant’s
inefficiency attributed to lack of proper incentives is compounded by his
limited capacity to undertake short-term investment. Low productivity,
high rental share and high costs associated with supporting facilities leave
him with very little surplus, forcing him to ration working capital employed in land operation (Herring, 1983; Sen and Varghese, 1966). For the same reasons, the share tenant puts in little or no investment in fixed capital. Durable investment a long-term investment which contributes to higher productivity on land for some years in future will not be to the advantage of the tenant. Insecure of tenancies give rise to uncertainty and the tenant is not sure whether he will retain operational control over the leased parcel till such time that the durable investment exhaust (Jacoby, 1953).

It is generally agreed that security of tenure is essential for productive efficiency and therefore, the tenant should be given security under legislation. There are, however arguments which undermine the significance tenurial security. For instance, it is argued that “even if uncertainty of occupancy is reduced by long lease terms of mutual understanding between landlord and tenant, the latter is reluctant to invest in permanent or semi-permanent improvement because they enable the landlord to increase the rent, and at the determination of the lease the tenant’s equity in these improvements is unprotected and subject to seizure by the landlord. He either must meet the higher bid of an outside tenant, or quit” (Schickle, 1941). Moreover, as regards the desirable period of security, there are different views. On purely economic grounds it seems that the tenant’s right of occupancy should not be too long. Very long term leases will protect the tenant from competition and will make him an indifferent cultivator. So the period of occupancy right of the tenant should not be too long. Limited tenant mobility from one farm to another is desirable. In fact,
the ability to evict or change tenants is sometimes used as means for ensuring greater efficiency (Singh, 1988).

There are but few studies which relate tenurial security and productive efficiency of the tenant. Even though Feder's study is not directly related to security of tenants, it is an important one in that it deals with the impact of land-ownership security on farmers' input use and output value. The study employs farm level data from three provinces in Thailand to test the propositions outlined above. The data pertain to samples of squatters, who lack secure legal ownership, as contrasted with legally titled farmers. The results confirm that the provision of secure ownership can increase productivity significantly (Feder, 1987). Chadha and Bhaumik (1992), examined whether the 'Operation Barga (OB) programme of the Left Front Government in West Bengal had a positive effect on productivity, by comparing the 'recorded;' tenants with security and the 'unrecorded' tenants without security. But Pal (1995) has shown that the programme has had a depressing effect on productivity because bargadars lacked entrepreneurial ability and supporting facilities. Thus the evidence from West Bengal does not conclusively show that security of tenure has a favourable effect on land productivity.

Should the security of tenure has a far reaching and positive influence on land use efficiency, there would be a strong case for devising policies which promote formal and written lease arrangements instead of spending time perfecting or drafting anew the laws seeing to end the divorce between ownership and cultivation of land. Such efforts in the past, as noted earlier, have only driven tenancy underground and if any, have
made the petty tenant more vulnerable. It may be argued that even if the emphasis on security of tenure is a little misplaced in any particular context, it may have a profound influence on productivity if an element of dynamism is injected into the system. In a situation marked by rapid changes in technology, security of tenure can be demonstrated to have far reaching influence on rate of adoption of the technology and therefore on productivity. The more recent input having great potential in rising productivity is used with a lag by tenants and in less quantities (Parthasarathy and Prasad, 1974). Insecurity impedes innovation.

Schiekele (1941), Heady (1947), Bardhan and Srinivasan (1971, 74); Lucas (1979), Bell and Zusman (1976), Caballero (1983) and others agree with Marshall and disapprove share tenancy because of its inability to achieve socially optimum allocation of resources. Schiekele (1941) pointed out that if the tenant is not a share cropper but is operating the tenanted land on a fixed kind or fixed cash rent basis, he may use inputs (i.e. variable capital), as intensively as the owner. It does not pay him to under-supply variable inputs. But the possibilities of the tenant neglecting investment in fixed or durable capital cannot be ruled out. Land improvement activities, such as the digging of a well, lowering or raising the level of the land, which increase output on a long-term basis will be neglected because the tenant's future control over the leased in parcel is doubtful. The neglect of durable capital by the fixed tenant (and also by the share tenant) can also lead to a less intensive use of operating capital by him inasmuch as the two are complementary. The short-term ill effects of tenancy are considered to be particularly serious in case of the share tenant. Acting on this premise, alternative policy models have been suggested to come to terms with this
problem and to make the share tenant produce at least as much output as
the land owner can attain. So as to prevent the sub-optimal equilibrium
from occurring, sharing of input costs between the tenant and his landlord
in just the same ratio as the output is shared is often considered necessary
(Schickle, 1941 : Heady, 1947). This prescription lowers the marginal cost
curve of the tenant by an extent sufficient enough for him to deploy
resources in just the way the owner operator does. The credibility of this
policy model based on the identified need for cost-sharing, which aims not
at an abolition of tenancy through radical redistributes reforms but merely
at regulating the lease market. Even if the tenant and his landlord agree to
share input costs in principle, the contract may at least to extends to cover
the cost of purchased inputs only and such ones as the cost of family labour
may not be shared, because of cost sharing contract does not cover this
item, only a portion of the marginal return from the labour input. With
specific reference to the share tenancy, some of the writers, Heady (1947);
Johnson (1950); Georgescue - Reozen (1960), Adam and Rask (1968)
comprising the one school hold the view that resources are by and large,
misallocated under the system of share tenancy, and could be made
function reasonably well, if the costs of cultivation are also equally shared
between the landlord and the tenant.

Adam and Rask (1968), also shared the inefficiency view of Marshall.
Taking a cue from Heady, they analysed how share cropping will be
efficient of cost sharing in equal to output share. While making distinction
between ‘Traditional lease’ and ‘Ideal lease’ in the share contract system,
they try to find an explanation why, inspite of the greater advantages of the
ideal lease (in which variable costs of production are equally shared
between 'land lord' and 'tenant'), the 'traditional lease' (in which the tenant alone bears the whole cost of variable factors) persists in large parts of the less developed countries. Share tenancy of the traditional lease system distributes risks and uncertainties between tenant and land owner in a tolerable manner. According to authors, the cost sharing puzzle suggested in the 'ideal lease' does not necessarily ensure that the increase in the landlord's rent arising out of the increased output will be greater than the amount of additional costs shared by the landlord. It has been pointed out that cropping will be efficient even though it need not be equal to the output share. The rule of equality of cost share with output share for the efficiency of share cropping holds good, in general, in the absence of risk and incentive effects (Braverman and Stiglitz, 1986).

Countering the Marshallian inefficiency proposition, Johnson (1950), argues that if tenant's work effort can be costlessly monitored and enforced by the landlord, resource allocation under share cropping can be as efficient as owner cultivation or fixed rent tenancy. Johnson (1950) receives support from Cheung (1969), who formally proved the efficiency argument with a theoretical model. In Cheung's model the landowner is a profit maximiser who can vary the amount of land at his disposal, decide the number and size of land parcels distributed amongst share tenants, decide the rent share and distribute the amount of labour to be put in the rented land. The only constraint on the landowner is that the tenancy contract must permit the tenant to obtain at least the same income as could be obtained by working as a wage labour. Otherwise no workers will offer themselves as share croppers. The requirement of costless monitoring of Johnson-Cheung
version has been criticized as unrealistic (Bardhan and Srinivasan, 1971, Bell, 1977, etc.)

On the theoretical front Cheung was attacked by Bardhan and Srinivasan (1971) who revived the Marshallian misallocation arguments in a model including the rational behaviour of both landlords and tenants demand and supply of lease and extending the conventional partial equilibrium analysis into a more general framework. Bagchi in a series of articles (1973, 1975, 1976) has criticized both Cheung and Bardhan-Srinivasan's formulation on the ground that both these models are based on unrealistic assumptions of competitive market. After Bardhan and Srinivasan (1971), many theoretical and empirical studies have been conducted to examine the relative productive / allocative efficiency of tenant and owner operated farms over the past two decades. The existing literature can be divided into two schools. One follows the Marshallian tradition and this group includes the works of Lucas (1979), Cabaltero (1983), Bell and Braverman (1981), etc. According to them, share cropping leads to pareto-inefficient allocation of labour because only a fraction of its marginal product is equated to the market wage rate. In fact, labour inputs remain under supplied since the tenant receives only a fraction of output produced in the leased in land. The other school known as the efficiency school or what Bell (Bell, 1986) has called new school includes the works of Newberry (1975); Reid (1976); Ali (1983); Pant (1983). They argue that share cropping could be pareto-efficient once land and other non-labour inputs are taken into account with some appropriate contractual arrangement.
The decision made so far classical and neo-classical and Marxist tradition analysis, almost all economists have condemned share cropping as inefficient. If the share cropping proves to be inefficient institution how could it's continued over the wide areas of rural India be explained by some empirical studies. The empirical investigation on the issue of share cropping efficiency also gives puzzle picture. The available empirical evidence on the efficiency of alternative land tenure contract is mixed. Some studies do not find significant inefficiency of share tenancy and the distribution of case study results shows no significant evidence of Marshallian inefficiency of share cropping (Otsuka and Hayami, 1988). The studies that support Marshallian inefficient hypotheses are Bharadwaj (1974) in Maharastra, Chattopadhyay (1979) in West Bengal; Bell (1977) in Bihar and Shaban (1987) in Bangladesh. On the other hand, several studies document the fact that share cropping has not adverse effects on efficiency. These includes studies in Gujrat by Vyas (1970); in Andhra Pradesh by Rao (1971); in West Bengal by Dwivedi and Rudra (1973); Parthasarathy and Prasad (1974) in Andhra Pradesh; Bliss and Stern (1982) in Uttar Pradesh, Jabbar (1977), Hossain (1977) and Zaman (1973) in Bangladesh; Ahmed (1974) in West Pubjab in Pakistan; Kauri (2003) in Assam. However, no conclusive evidence has been provided by empirical research to prove inefficiency or efficiency of tenant farming and findings are mixed (Appu, 1975; Rudra, 1982; Bhalla 1977; Murty 1987; Srivastava, 1983). Difference in factor endowments, adoption levels of new technology, geographical location and many more factors have lead to believe that it is not necessary to believe in Marshallian inefficiency of share cropping as a proper result.
In view of these conflicting findings it has been of interest to analyse in the context of industrially backward and agriculturally depended Barak Valley region of Assam.

2.2 RESOURCE USE EFFICIENCY UNDER TENANCY: SOME EMPIRICAL STUDIES IN INDIA

A substantial empirical works have been done dealing with the problem of resource use efficiency of share cropping using the data of villages of different states of India and a brief survey of that literature is discussed in this section.

Rao (1971), carried out an analysis of farm management data in a rice zone of Andhra Pradesh. In his study, he examined the comparative efficiency with which land is cultivated in owner operated farms and share tenanted farms. The results of the analysis suggested that “when the relative alternatives are specified, the evidence examined, does not indicate significant inefficiencies in the use of land under share cropping”. Using Cobb-Douglas types of production function, Rao further analysed the relative efficiency of two modes of cultivation according to farm size and ultimately concluded that share croppers cultivate their land more intensively than the large owner operators.

Bharadwaj (1974), using the evidence from the state of Maharashtra, examined the relationship between the levels of tenancy and input use and output produced per unit of land; and came to the conclusion that “with increasing levels of tenancy output per acre showed a tenancy to decline. Also, at a lower levels of tenancy inputs were applied relatively more intensively”.

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Vays (1970), studied four villages of Gujrat comprising two commercialized villages of Central Gujrat and two relatively backward villages of North Gujrat. He found that the resource use efficiency of tenant-cultivated farms is higher than the owner cultivated farms. Specifically, he concluded that “the high efficiency of tenants especially the medium and small ones, in resource use is indicated by the high (average) input output ratio on their farms.”

Bhaumik (1991), examined the effect of tenancy of resource allocation for individual and aggregate of paddy crops in two alternative rental systems by comparing between own land with the rented land for each rental system of Midnapur district of West Bengal. He reported that there existed a tendency among all categories of tenants (recorded and unrecorded) to apply greater quantum of inputs per acre and gained better productivity level on the own land compared with share cropped portion of land. This indicated the mis-allocative behaviour of inputs of cropped sharing tenancy. No significant differences in economic performances, however, existed between owned and fixed rent plots of the tenant households.

Bliss and Stern (1982), in their study of Palanpur village of Uttar Pradesh compared the productivity of wheat on tenanted and non-tenanted land. The productivity comparison was carried out between the pure owner and pure share cropped farms as well as between the owned and share cropped plots of owner-cum-share croppers’ farms. On the basis of the field data, they concluded that, for pure owner and pure share croppers, “the difference between yields on tenanted and non tenanted plots is
insignificant”. While for owner-cum-share croppers, “yields on tenanted land are significantly different from those on non-tenanted land with the farmer being the larger”.

Analysing the Farm Management Survey (FMS) reports relating to five districts in the three states of West Bengal, Andhra Pradesh, and Punjab, Rudra (1992) concluded that “It would thus seem that the generally held idea that tenant farms perform less well than owner operated farms might be more or less valid when the comparison is confined to small sized farms, but not so when medium or big farms are thought of”. Using the same source of information, Chakravarty and Rudra (1973) found that “there are not very many marked differences in the input-output patterns of owner operated farms and tenant operated farms; and that the latter are not run very differently from the former”. Further, Dwivedi and Rudra (1973) using FMS data for Hoogly district, West Bengal of 1970-71 substantiated the earlier position that there is hardly any differences in the productivity of owned and tenanted farms.

Thus, in order to test the significance of the Marshallian logic of ‘inefficiency’, a large number of case studies have been conducted in India. They compare the average output and inputs per unit of land between share tenancy and owner cultivation or fixed rent tenancy, mostly in the production of rice and wheat. In order to control the quality differences in land and the factor market imperfections, some efforts have been made to classify observations according to irrigation status and the size of cultivation. However, most of these works not only differ at the level of their methodologies that they adopt in selecting criterion variables, but also
arrive at mixed and conflicting results regarding the efficiency theory of share cropping. While the majority of studies did not find the inefficiency hypothesis of share cropping to be significant, there are some studies reporting inefficiency, hypothesis to be significant.

2.3 EXISTING EMPIRICAL WORKS ON TENANCY IN ASSAM

With a very few exceptions, neither any systematic theoretical exercise nor any empirical investigation has yet been carried out on the issue of land tenancy contract in Assam in general and Barak Valley in particular. Many scholars only touched upon the issue of land tenancy contract while analyzing the agrarian reforms in the state. Some studies though not based on pure economic analysis have been conducted to highlight the tenancy situation and the problem associated with it. In this respect the studies by Goswami (1962), Guha (1991), Chakravarty (1995) and Gautam (1995) have found to be outstanding. These studies explore the nature and pattern of tenancy in the state of Assam.

Guha’s (1991), study tries to provide a picture of the historical evolution of tenancy in Assam with its extent, forms and district-wise variations. Until the ends of nineteenth century, the adhi system (share cropping) was of marginal importance in Assam and rent in kind was predominant mode of rental payment. Adhi assumes various forms, but in practice, the rent burden under different forms of adhi tend to be the same as under fixed rent system through adjustment like landlords contributions towards seeds or transplantation costs or both. The study also touches upon the issue of economic conditions of the tenants and comes to the conclusion that both adhiars (tenants) and fixed rent tenants were often pushed more or
less to the verge of the subsistence level or below it. Though this study, no
doubt, is a pioneering work in the area of agrarian institution of tenancy yet
it provides only a partial picture of the whole mechanism of tenancy
contract in Assam.

Goswami (1962) analyses the terms and conditions of tenancy
contracts in Assam and has observed that there exists direct association
between the pattern of crop and cost sharing by the landlord. The study
reports that when landlord supplies the plough-cattle, he gets one quarter
of the produce and tenant three quarters. If landlord does not supply the
plough-cattle, he receives one-fifth of the produce and the tenant four-fifth.
This study also fails to provide analytical explanations of tenancy in Assam.

In a well researched study covering eleven villages of two districts of
Central Assam, Kamrup and Darrang, Gautam (1995) has examined the
agrarian relations between the tenant and the absentee landlord in respect
of the duration of tenancy, sharing of crops, costs of cultivation and debtor-
creditor relationship between the two. He has observed that in Assam the
landlord-talent relation depends on local customers, traditions, types of
crops grown, economic status of the parties and compulsion under distress.
The study also highlights that in the presence of tenancy system,
agricultural development in the state depends on cooperation and cordial
relations between the contracting partners, the degree of dependency of
landowner on agriculture, the cost sharing provisions and the economic
condition of the landlord as well as the tenant.

Chakravarty (1995) on behalf of the land reforms unit, Lal Bahadur
Shastri National Academy, has prepared a report on the tenancy situation
of Assam. The data for the study have been collected by the IAS probationers of 1987, 1988 and 1989 batches between September 1988 to May 1991 covering seven districts of the State to explore the incidence of recorded and unrecorded tenancy, the socio-economic status of the lessors and the lessees, the prevalent forms of tenancy and the problems associated with the security of tenure and payment of rent. The study highlights the prevalence of concealed tenancy in the state. This study is an important account of the terms and conditions of tenancy that are persisting in different parts of the state.

Nag (1991) has made an appraisal of the tenancy situation in Assam and tried to find out the reasons why land reforms Acts designed to improve the lot of the tenant farmers have not been implemented in Assam. In a similar study, Phukan (1991) has also reached the conclusion that tenancy reforms in Assam have not had a favourable impact upon the tenant farmers. Sengupta (1991) in his study of impact of land reform in the Karimganj District has shown that as a result of land reforms, the tenants and ryots of the district who have been freed from exploitation by the zamindars are being exploited by the State Government. Agnihotri (1984) in his study on land reform legislation in Assam as a means of rural development has traced the origin and development of tenancies in historical perspective and also provided a critique of the land reform measures that were undertaken in the State with a view to protecting the interest of the tenants including sharecroppers.

Analyzing NSS and Census data, Khatun (1984) has made an extensive study on the extent of tenancy in Assam. She has argued that tenancy arrangements in Assam whose terms and conditions are mostly
The studies reviewed above in the context of Assam to highlight the problem of land reform in general and tenancy institution in particular, suffer from methodological shortcomings. The main limitations of many of the studies reviewed are: casual empiricism, tautological explanation and unwarranted suggestions. Though its limitations, but tenancy is a theoretically rich institution with its multivariate dimensions but no effort has yet been made in the Barak Valley of Assam to correlate empirical observations with the existing theoretical propositions. In spite of its existence over centuries, the typical terms and conditions of tenancy, its resource adjustment ability, productive efficiency and informal credit linkages including usufructuary mortgage of land are still remain either unstudied and understudies. Further, no theoretical framework has yet been found to explain the extent of tenancy by identifying the relevant factors responsible for the incidence of tenancy in the Barak Valley.

In this disquieting backdrop, the present study is an attempt to explore the nature and impact of tenancy contracts in Barak Valley of Assam and to provide the empirical analysis to a number of theoretically established propositions relating to the agrarian institution of tenancy. The study also attempts to capture the tenancy mechanisms within a theoretical framework in order to provide an explanation of tenancy for the Barak Valley region of Assam.
NOTES:

1. This is based on the assumption that one hour of the landlord’s (tenant’s) time devoted to supervision (management) is equivalent to only a fraction of one hour devoted to supervision (management) by the tenant (landlord).

2. Moral hazard in the choice of effort by the tenant is determined by the choice of projects to be undertaken by the tenants. Choice of undertaking projects may be of two types such as “less risky” or “more risky”. The dominance of share contract over a fixed rent contract takes place when the surplus from the less risky project is higher than in the risky one.

3. Among others Bliss and Stern (1982) point out the generally slighted views of Marshall on share tenancy and quote from his work to show why much of credit for later day developments in the theory of share tenancy should rightfully go to him. Pearce (1983), state that “no one was more aware of the limitations of his model than Marshall himself, who noted that if landowners possessed the opportunity to determine the level of inputs which the tenant supplies, then an efficient solution would result.” Otsuka and Hayami (1988) explicitly pointed out that “the Marshallian thesis is not necessarily the same as Marshall’s.”

4. If security of tenure is provided to the tenant it will motivate the tenant to adopt new technology. In the absence of the security the tenant will not be ready to take risk associated with the new technology. The security of the tenure associated with written lease agreement will increase the tenant’s access to institutional credit in particular and credit in general and thus will enable him to use inputs intensively. The security will therefore increase the capacity of the tenant to undertake both durable and non-durable investment (Feder, 1987, pp 16-30).
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