

**AGRICULTURAL DEVELOPMENT AND PETTY TENANCY:  
SOME COMMENTS ON THE INDIAN EXPERIENCE**

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A Dissertation submitted in partial fulfilment  
of the requirements of the  
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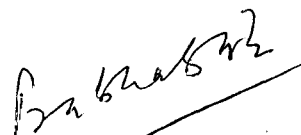
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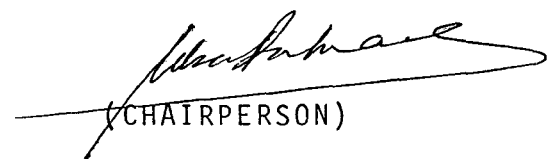


CERTIFICATE

This dissertation, entitled "Agricultural Development and Petty Tenancy : Some Comments on the Indian Experience ", by Mr. Anand. V.Swamy, which is submitted in partial fulfilment of the requirements of the Master of Philosophy degree, is an original work to the best of our knowledge. It has not been previously submitted for any other degree of this or any other university.

We recommend that this dissertation be placed before the examiners for evaluation.

  
(SUPERVISOR)

  
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The relationship between agricultural development and petty tenancy has been the subject of extremely heated discussion in the literature on Indian agriculture for the last fifteen years. This dissertation takes this discussion as its reference point and derives its motivation from it. We elaborate below. It is beyond the scope of this brief introduction to attempt a survey of the various arguments advanced. We will merely discuss a few important works, with a view to setting the stage for introducing the project we have undertaken in this dissertation.

In 1973, Amit Bhaduri published two extremely important articles in Frontier<sup>1</sup> and Economic Journal<sup>2</sup> which sparked off a great deal of discussion. Bhaduri argued that production relations in Eastern Indian villages can be described as 'semi-feudal'. He argued that this description is warranted because of the following four characteristics of agrarian relations in this region : " (a) share-cropping (b) perpetual indebtedness of small tenants (c) concentration of two modes of exploitation, namely usury and land-ownership in the hands of the same economic class (d) lack of access of tenants to the market."<sup>3</sup> Bhaduri argued that in such a situation landlords may have a vested interest in perpetuating economic backwardness. The landlords

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1. Bhaduri (1973a)
  2. Bhaduri (1973b)
  3. Bhaduri (1973a)

earn two kinds of income from their share-tenants; one is rental income and the other is interest earned on consumption loans which tenants, having no other source of credit, take from them. If an innovation is introduced, the landlords may suffer a net loss because "economically better off tenants will require less consumption loans and in some situations it is possible that the loss in income from usury will more than outweigh the gain from higher productivity."<sup>4</sup>

Bhaduri's formulation has attracted comments from a wide range of authors. So much so, that his work has become a focal point around which much of the discussion on share-tenancy in backward agriculture has been conducted. Many criticisms have been made of his work. Some are concerned with what we may call the nitty-gritty of his argument. It has been argued, for instance, that the landlord, due to his socio-economic dominance, may be able to adjust the conditions of the contract with the tenant in such a way that the entire increase in output accrues to him (the landlord) thereby ruling out the possibility of net loss due to a decline in income through usury (due to the now more viable tenant borrowing less than before).<sup>5</sup> The assumption that loans are predominantly taken from the landlord has also been questioned.<sup>6</sup> Also interesting are arguments which have engaged with Bhaduri's formulation at a much

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4. Ibid.

5. Basu (1984), P. 119.

6. Rudra (1982), P. 83-84.

broader level by questioning his identification of share-tenancy and usury with 'semi-feudal' relations. For instance, Mihir Shah has argued that "modes of production cannot be identified by merely observing the prevailing forms of exploitation without attempting to understand the precise functionality of these forms.....". He goes on to point out that "... these forms could be perfectly compatible with capitalist agriculture and their specific *raison d'être* can only be understood by placing them in the context of the enterprise and the mode of production within which they exist."<sup>7</sup> Shah makes it a point to clarify that he is not arguing that share-tenancy always involves what he calls a 'concealed wage-relationship'; the matter has to be decided, he writes, through historical investigation of each case. A somewhat similar position is taken by Ashok Rudra, another critic of Bhaduri. He writes: "... it is certainly not our contention that share-tenancy has not been a feudalistic institution in different parts of the world..... Our contention is that in many parts of India tenancy arrangements are changing in such a fashion as to become compatible with emerging capitalistic forces in agriculture."<sup>8</sup>

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 7. Shah (1980)

8. Rudra ( 1982), P. 98.

It is beyond the scope of this dissertation to enter into a discussion of the validity or otherwise of the overall positions advanced by Bhaduri, Rudra, Shah etc. However, it does appear to this student that the issues may become clearer if, as suggested by Shah, we get down to examining in detail the exact nature and role of share-tenancy (and, in fact, petty tenancy in general) in different contexts. In this dissertation we attempt precisely one such exercise. We describe below the structure of this dissertation by summarising briefly the contents of each chapter.

In our first chapter we discuss only rural India in the colonial period. We argue that this was a phase in which though agriculture became more commercialised, there was little investment of capital in agricultural production itself, even though capital did go into usury, land purchase etc. Not surprisingly, the techniques of production remained, on the whole, largely unchanged during the colonial period. We draw attention to the fact that, in this period, the practice of giving land out on lease to small tenants (especially share-tenants) seems to have been very common-even in the commercialised regions.

In our second chapter we refer only to independent India. We first point out that the land legislations introduced after independence did lead to the eviction

of petty tenants, but the arrangement survived because there were many other ways for a landlord to protect himself from tenancy laws. We then argue that the decline of petty tenancy seems to have received an impetus because of a development which represents a major break from the colonial period.-the fairly widespread phenomenon of investment by big landowners in a completely new and much more productive technology. Thus, the discussion in our first two chapters establishes that a clear contrast can be seen between the attitude to petty tenancy in the colonial period, when there was little investment by big landowners in agricultural improvement and agricultural technology remained backward, and the 'Green Revolution' era when, at least in some regions, big landowners invested in new and much more productive technology.

In our third chapter we advance some tentative arguments to explain the preference for petty tenancy in one context and the lessening of this preference in another. We first point to the fact that agrarian India, in general, is (and has been) characterised by an excess supply of agricultural labourers and petty tenants. We argue that in such a situation the landlord may, in return for giving a petty tenant access to land (and, therefore, to security), be able to extract an

even larger surplus than he would obtain if he were to cultivate with hired labour. Regarding the decline of petty tenancy in the face of new technology, we argue that uncertainty regarding the behaviour of output in the changed technological situation may make it difficult for the tenant and the landlord to agree on a contract, since the implications of such a contract for their respective incomes would not be unambiguously known.

Finally, we conclude this dissertation with a recapitulation of our entire discussion and some comments on the issues discussed in this introduction.

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## CHAPTER ONE

### LAND SETTLEMENTS, AGRICULTURAL IMPROVEMENT AND PETTY TENANCY IN COLONIAL INDIA

One of the first tasks confronting India's colonial administrators was to decide in exactly what manner land revenue was to be collected. The task was not a simple one; rights with respect to land-control and use had been distributed in an extremely complex way in pre-British India. There had, moreover, been considerable regional variation in the arrangements followed. Yet the task was crucially important. Land revenue was a major source of income for the government; the choice of the system of land tenure also had important political implications. It was also clearly recognised that the kind of settlement made would have important implications for long-term trends in investment and productivity in agriculture. Therefore, considerable analysis, thought and discussion took place before these settlements were decided upon. This chapter begins with a brief discussion of the understanding behind each of the two major types of land settlements in colonial India - the Zamindari and the Ryotwari. We will rely very heavily on two well-known works which are in turn based on an examination of official documents and correspondence (of the British administration) . We will not go into the question of

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a possible divergence between the real and stated objectives of the British administration. In the next section we comment on the extent to which the expectations of the administrators who devised these settlements were actually realised, especially their hope that agriculture would receive a stimulus. Essentially we make the point that while agriculture did become much more commercialised in the colonial period, there was little propensity to invest capital in production. Capital went into acquisition of agricultural produce; it flowed into usury, land purchase etc.; it was rare, however, for it be invested in agricultural improvement. A return on capital was sought through loans at high interest rates, acquisition of produce at low prices and land purchase but the prospect of earning a return through raising the level of output does not seem to have been attractive. In that sense 'Capitalist Farming' took place on a very limited scale in the colonial period. Not surprisingly, it was a phase in which the overall level of technique in agriculture remained more or less unchanged. In the third section we point out that in the colonial context petty tenancy (especially share-tenancy) was very widespread. The growing commercialisation does not appear to have reduced the tendency to lease out land to the landless (or to small owners). If anything, the converse may have been true. With capital generally not going into production and techniques



remaining more or less static, the choice of petty tenancy seems to have frequently been 'economically rational'.

### Formulation of Land Settlement Policies

The first major initiative taken by the British administration with respect to land settlement was the introduction of a 'Permanent Settlement' in Bengal, Bihar and Orissa in 1793. In Bengal, land revenue had traditionally been collected by Zamindars who had had not only the revenue collecting right but also many political and administrative rights and duties over an area which could stretch across hundreds of villages. The zamindar had to maintain law and order in his estate and had also to maintain an army which could be called upon in the service of the emperor in times of need<sup>1</sup>. Revenue collection had never been a simple job. Each zamindari had a complex bureaucracy for revenue collection. Effective collection could not depend excessively on use of force because the area to be administered was huge and all collections were made at the same (harvest) time. The zamindar, therefore,

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### N O T E S:

1. When the Burdwan zamindari was ceded to the East India Company in 1760, it covered 5, 174 square miles. The Mughal land revenue demand was Rs.31,00,390/- and the sum required annually to maintain soldiers was Rs.3,00,000/-. See McLane, "Revenue Farming and the Zamindari System" in Frykenberg. ed. (1977), P - 21.

was heavily reliant on his officials and on influential villagers for revenue collection. The problems were even more acute when zamindaris changed hands because the new zamindar had only two unattractive options to choose from; if he changed the officials, the new ones would not have enough local level knowledge to do the job; if, on the other hand, he retained the old officials, their loyalty was suspect. New zamindars, therefore, had sometimes taken recourse to 'revenue-farming', a system in which the right to collect revenue was given out to the highest bidder. When the East India Company took over 24 Pargannas in 1757 and the districts of Burdwan, Midnapore and Chittagong (all in Bengal) in 1760, it continued with this practice. The right to revenue collection was sold to the highest bidder for a period of three years at widely publicised open auctions. The system was tried again by Warren Hastings in 1771; the leases in this case were for a period not exceeding five years. The 'Farming System' had disastrous consequences in more than one sense. Revenues could not be stabilised.<sup>2</sup> The peasantry was subjected to terrible brutalities by revenue-farmers who had to not only ensure that they were able to pay the high amounts that they had bid but also make large profits for themselves in the short duration of the lease.<sup>3</sup> The 'farming system', therefore

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2. Gross revenue was 26.8 million rupees in 1765 but almost two decades later, in 1784, only 24.5 million rupees could be collected. See Sen (1962), P - 61.

3. In his speech impeaching Warren Hastings, Edmund Burke gave a graphic description of the impact of the revenue

soon came in for severe criticism.

On his arrival in Bengal, Philip Francis, who, as a member of the Calcutta Council was to submit in 1776 a plan which largely anticipated the Permanent Settlement, promised to send to England "such an Account of the internal state as will make every man in England tremble." Francis refused to accept that all the devastation was due to the Great Bengal Famine (1770) alone. He suggested that "the Measures since taken by Government have in this respect been as fatal to the country as the famine itself"<sup>4</sup>.

Francis himself proposed a plan which was in every way opposed to the 'farming system'. He argued that the view that traditionally, the state had 'owned' the land was misplaced, that the guarantee of private property rights was necessary for agricultural progress and stability and that the tax on land should be moderate and fixed in perpetuity in order to leave the landlord with the incentive to improve his lands. In his plan of 1776 he wrote: "The company, I believe, had conceived an early but erroneous, opinion that by the constitution of the Mogul empire the governing power was the proprietor of the

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f.n.-3(contd.)

3. farming system: "The peasants were left with little other than their families and bodies. The families were disposed of.....The tyranny of Mr.Hastings extinguished every sentiment of father, son,brother and husband." Sen (1962), P.61.

4. Guha (1963), P-90.

soil; consequently that in the management of their territorial acquisitions they ought not to content themselves with a fixed tribute as government, since they had the right to engross the entire produce as landlord.<sup>5</sup> At another point, regarding the fixity at the assessment, he argued that many advantages would follow from the proprietor knowing how much had to be paid and knowing that the surplus would be his own:".... if he grows rich, the better for the State. He will then have a natural encouragement to excite his Industry without only motive to conceal the Produce of it." The zamindar would invest because "the proprietor will be satisfied he is labouring for himself"<sup>6</sup>. Regarding the development of a land market following the institution of private property rights he felt that "a transfer of landed property to monied people who are able to make improvements will be in some degree advantageous to the government and the country"<sup>7</sup>.

Though Francis' plan was initially rejected in the Calcutta Council in 1776, his suggestions soon began to be implemented one by one. Initially ( in the mid-seventeen eighties) settlements were made for short periods (a year or more). In 1789 decennial settlements were made and in 1793 it was declared with respect to the zamindars with whom decennial settlements had been made that 'at the expiration of the

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5. Ibid, P.98  
 6. Ibid, P.114  
 7. Ibid, P.106

/ term of settlement no alteration will  
/ be made in the assessment which they have respectively engaged to pay, but they and their heirs and lawful successors will be allowed to hold their estates at such assessment for ever."<sup>8</sup>

Though Lord Cornwallis (who, as Governor-General, finally issued the famous Regulations of 1793) did not acknowledge any intellectual debt to Philip Francis, the set of expectations with which he agreed with and finally vigorously pursued the idea of the declaration of a permanent settlement was not in fact very different from that of Francis. This is evident from the following comment containing a prediction regarding the impact of the Permanent Settlement which he made in a letter he wrote in 1790: "Landed property will acquire a value hitherto unknown in Hindoostan and the large capitals possessed by many of the natives in Calcutta which are now employed in usury or monopolising salt and other necessaries of life will be appropriated to the more useful purposes of purchasing and improving lands". As for the zamindars, they would, he hoped, turn into "economical landlords and prudent trustees of public interest".<sup>9</sup>

The consequences of the Permanent Settlement were very different from those envisaged (the point is elaborated

8. Ibid, P.11

9. Ibid, P.172-73.

later in this chapter) and when it came to the question of settling areas subsequently conquered by the British, grave doubts were expressed regarding the desirability of such a settlement. The criticism was strongly and coherently expressed by a group of subordinates of Lord Wellesley (Governor-General in the period 1798-1805). They differed from the position represented by Lord Cornwallis on a range of questions: law, administration and land relations. Stokes has put it: "As the 'Romantic' generation in British-Indian history, they revolted against what they considered to be the cold, lifeless, mechanical principles informing the Cornwallis system, its a priori, unhistorical attitude, which would impose English ideas and institutions on Indian society, and its facile optimism in the virtue of human nature when left untrammelled by the government".<sup>10</sup> Munro and his contemporaries favoured a much more active and personalised form of government; public affairs would be managed by not by an impersonal set of rules but by the government as 'ma-baap' (mother and father).<sup>11</sup>

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10. Stokes (1959), P. 15

11. The vehemence of the 'Romantic' criticism of the "Cornwallis System" is reflected in the following comment made by Malcolm, another subordinate of Lord Wellesley who became the Governor of Madras in 1828. He said that he feared "no human being (certainly no Nabob or Maharajah) ...half as much as an able Calcutta civilian, whose travels are limited to two or three hundred miles, with a hookah in his mouth, some good but abstract maxims in his head, the Regulations in his right hand, the Company's Charter in his left and a quire of wire-woven foolscap before him"!

Accordingly, the Ryotwari system which they favoured involved a direct settlement with the peasant, eschewing all intermediaries. The Ryotwari system came to prevail over large parts of Madras and Bombay presidencies. In North-West India a variant known as the Mahalwari system was introduced.

Munro and his associates, while favouring the Ryotwari system, had not attempted to lay down any hard and fast rules for assessment (i.e. the amount of land revenue to be collected from each peasant). The most influential argument regarding this question came from James Mill, a utilitarian who was strongly influenced by the Ricardian theory of rent. Ricardo had argued that the least fertile cultivated land yielded no rent after the costs of cultivation and a normal rate of profit had been accounted for. The more fertile lands yielded a rent to landlords which could be taxed without affecting the level of output or profitability. The theory as adapted to India by Mill seems to have regarded the Indian peasant as his own landlord, tenant and labourer all rolled into one<sup>12</sup> and the revenue was proposed to be set at a level such that only a normal profit was earned over and above costs of cultivation.

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12. The point has been made by Utsa Patnaik.  
See Patnaik (1981), P. 23

The argument was explicitly stated by G.Wingate, a British official: "Rent, in the estimation of modern economists, results from land varying in fertility and advantages of situation which makes it of more value in one place than another. On the more valuable land a greater amount of produce can be raised from the same outlay than on the less valuable land, but as the latter must suffice to remunerate the occupier, the excess of produce yielded by all kinds of land above that of the worst in cultivation constitutes a rent....Rent may, therefore, be received entirely by a landlord or be shared by him and other parties in different ways without affecting the cost of agricultural production.... And as the amount of rent constantly increases with the progress of society without any effort on the part of the landholder, it may be looked upon as the natural inheritance of the public and forms beyond all question a most legitimate fund for contributing to the expenses of Government."<sup>13</sup> Mill was emphatic that the assessment should not be fixed in perpetuity and that, in such a circumstance, as and when it became possible for the peasant to earn a rent he would simply lease out the land and live off the rent. Mill and his followers had no faith in rent-receivers whom John Stuart Mill (the son of James Mill) later referred to (in the context of the Permanent Settlement in Bengal)

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13. Stokes (1959), P. 128



as 'useless drones on the soil'.<sup>14</sup> They placed their hopes entirely on the cultivator. Mill's proposals (and in fact the Ryotwari arrangement as such) did meet with considerable resistance but, right up to the nineteen-twenties, the theory of rent remained extremely influential.

#### Agricultural Improvement in Colonial India

It is well-known that the various settlements did not in fact lead to much agricultural improvement in India in the colonial period. In the case of the Permanent Settlement the rental demand was fixed at a very high level because it was to remain unaltered in perpetuity.<sup>15</sup> The government was harsh with defaulters and their estates were put up for public auction. A large number of estates were sold in this fashion.<sup>16</sup> In such a situation it is perhaps not surprising that zamindars by and large did not choose to play the role

14. Ibid, P.115.

15. According to one estimate, between 1764 and 1793-94, land revenue demand trebled. See Bhaduri (1976). B.B. Chaudhary estimates that between 1765 and 1793 the revenue demand doubled. See Chaudhary, "Eastern India" in Section II, "Agrarian Relations" in Kumar ed. (1982; reprint 1984), P.88.

16. The revenue demand of the affected estates of Bengal and Bihar as a proportion of the revenue of the province as a whole could go as high as 14.2% (in 1798-99). Ibid, P.96.

of 'improving landowners'. Zamindars sometimes resorted to the device of passing on the responsibility for revenue collection to another party who had to pay them only a fixed sum. In East Bengal, sometimes the lessee in turn passed on the duty of revenue collection to another person who too passed on the job and so on, leading to the formation of a long chain of intermediaries between the zamindar and the cultivator. This phenomenon is referred to in the literature as 'sub-infeudation'.<sup>17,18.</sup>

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17. A study of Bakarganj district in East Bengal mentions that there could be as many as twenty intermediaries between the cultivator and the zamindar. One hundred and sixty-two revenue terms were used to describe the various forms of tenure and sub-tenure. See Raychaudhary, "Permanent Settlement in Operation : Bakarganj District, East Bengal" in Frykenberg ed. (1979), P.167.
18. The Land Revenue Administration Report, 1871 put it thus: "With the permanent settlement the government abdicated its position as exclusive possessor of the soil and contented itself with a permanent rent charge on the land, escaping all the risk and labour attendant upon detailed mofussil collection. The zamindars were not slow to follow the example set.....The practice of granting such under-tenures has steadily continued, until at present day but a small proportion of the whole permanently settled area of Bengal remains in direct possession of zamindars; izaradars, dar patnidars, darizaradars and further subordinate tenures have been created in large numbers". See Ghosh and Dutt (1977), P-10.

Over time, however, with rising prices, the revenue demand, which had been fixed in money terms, became much less burdensome. John Shore had estimated the share of the government in total agricultural output on the eve of the Permanent Settlement to be forty-five per cent; the Floud Commission's estimate in 1940 was less than two percent.<sup>19</sup> Zamindars, however, by and large still proved extremely reluctant to behave as 'improving landlords.' Robert Knight, a newspaper editor, wrote in the eighteen-eighties: "The zamindar has sublet to the patnidar and the patnidar to the men below him, until we have a mass of intermediaries who would never have come into existence at all, had the zamindar wisely enhanced his rentals as money changed in value and the acreage under tillage became wider as population grew. The zamindar's sin has been the neglect of his own interest"<sup>20</sup>.

Meanwhile, other crucial changes were taking place in the production structure. Foreign trading companies over time greatly expanded their activities and, in a variety of ways, ensured a much wider cultivation of crops for export.<sup>21</sup> Indigo was the first crop to be introduced.

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19. See Chaudhari, "Eastern India" in Section II, "Agrarian Relations" in Kumar ed. (1982; reprint 1984), P.89-90.

20. Sen (1962), P=65.

21. The increase in the scope of these activities comes

Subsequently, jute, rice, sugar-cane, opium, silk and tea were also grown and exported. The precise manner in which production and marketing were organised varied across crops and regions. Tea, for instance, was mainly grown on plantations cultivated entirely by wage-labourers on waste land away from regions of settled cultivation. By and large, however, the other new 'cash crops' were grown in the earlier settled regions.

A complicated system in which advances of capital and the process of marketing were interlinked evolved over time. In the case of jute, for instance, a system known as dadan became widespread. The cultivator, in exchange for an advance from the merchant at the beginning of the season, would contract to sell his output at a pre-determined price (often much lower than the market price). A complex network of intermediaries came

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 21.(F.N. Contd.) through clearly in the following observation from a report on the East India Company: "The company found itself more and more forced to depend on the use of its capital for production only in India and trade between India and her neighbours... Just as there was an evolution from the independent voyagers to an organisation necessitating the factory and the port, so there were changes in the methods of doing business. In the earliest stages activities were confined to simple purchase and sale. With the advent of the factories the regular Indian custom of advancing money to the merchants was adopted.... Very often it went over the heads of merchants and gave orders direct to the producers through the native brokers". See Ghosh and Dutt(1977), P.34.

up in the process of financing and sale of 'cash crops' as the following example cited in a report referring to the Sadar subdivision of Murshidabad district indicates.<sup>22</sup> For inland trade, produce moved in the following way: cultivator-bepari (commission agent)-local agents or mahajan- wholesale dealer-retail dealer-buyer. For overseas trade: cultivator-bepari-local aratdar or mahajan-brokers of exporting houses-overseas buyers. The bepari was financed by the aratdar who sent him from village to village to make purchases. The aratdars belonged to the merchant class and used their own capital as did the wholesale and retail dealers. The brokers of exporting houses too were financed by commission agents of the exporting houses. However, though capital was advanced frequently in order to acquire the produce there was very little investment of capital in production; the level of technique remained extremely low. The case of the zamindars has already been discussed; the attitude of the European entrepreneurs and the Indian intermediaries was not very different.

The European entrepreneurs had even sometimes bought a zamindari or an intermediate right but this was only in order to maintain control over the ryot who was now his tenant-not to attempt to improve the process of production itself. With the passing of acts in 1859 and 1885 protecting the rights of tenants, a class of intermediaries, who combined a variety of activities including money-lending, trading and leasing out land as well as direct cultivation,

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22. See Mukherji, "Imperialism in Action through a

had grown in Bengal. They were referred to as Jotedars. The Jotedar cannot be accused in general of neglecting his financial interests (as, perhaps, some zamindars could); a memorandum to the Flood Commission (1940) referred to him as a "pushing and go-ahead businessman".<sup>23</sup> Regarding the behaviour of jotedars, however, a recent study has concluded: " This group took over a number of functions of the agricultural capitalist ....but he did not centralise production under his direct control nor help to bring about a technical transformation of agriculture".<sup>24</sup> The conclusion is quite unavoidable: agriculture in permanently settled regions of Eastern India became more commercialised in the colonial period but there was by no means any widespread growth of capitalist farming and no significant improvement in the techniques of cultivation.

The Ryotwari system was, as we had indicated in a previous section, in principle committed to vesting private property in the lands of the cultivator. However, it was not always easy to ride roughshod over the socially powerful landholders of pre-British times. In Madras, for instance, in the early years of the Ryotwari administration, some efforts were made to undermine the importance of the village elite-but these efforts met with fierce resistance .

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 F.N.22(contd.) Mercantilist Function" in De ed.(1976), P.735.

23. Ghosh and Dutt (1977), P.72.

24. Ibid, P.75

Frykenberg and Mukherjee<sup>25</sup> mention that, in this phase, an attempt to treat the kadim ryots of Nellore (who were the village lords) on par with the payakari ryots (or share-croppers) led to disturbances on such a scale that they are not hesitant to call it a "minor social revolution". When the Ryotwari system was modified and introduced for the second time in the Madras presidency in 1818, special instructions were given to the relevant officials to avoid infringing the rights of mirasdars and other village leaders. As Mukherjee and Frykenberg put it: "Admission of these lesser ryots to a footing of equality was deemed to have been a just cause for complaint against the earlier, unrevised Ryotwari system".<sup>26</sup>

Neeladri Bhattacharya has described<sup>27</sup> how the same tension between the need to conciliate the old elite and the urge to settle with the peasant existed in Punjab. Even though in most regions of Punjab the jagirdars lost much of the importance they had possessed in pre-British times, in a few pockets in South-East Punjab they were still able to retain their influence, despite the weight of the

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25. See Frykenberg and Mukherjee, "The Ryotwari System and Social Organisation in Madras Presidency" in Frykenberg ed. (1979).

26. Ibid, P. 242

27. Bhattacharya (1986)

'Punjab Tradition'<sup>28</sup>, which so favoured the peasant proprietor. Our argument must not, however, be misunderstood. It is not our contention that the Ryotwari system did not at all undermine the power of village elites. Rather it is that, inspite of the Ryotwari system, substantial landholders with enough land and resources to cultivate on a large scale and invest in agricultural improvement (if they so desired) continued to exist.

The extent of inequality in landholdings in ryotwari areas was also sometimes aggravated by the phenomenon of land transfers. In the Bombay Deccan, starting around eighteen fifty, there was a huge increase in the cultivation of crops for sale. G. Wingate, a British official, wrote in 1862:"...In all parts suitable for the production of exportable products such as the Southern Maratha Country and Khandesh, these are promptly raised to meet the wants of the market...". Regarding the view that in other parts of the Bombay Deccan this was not the case, he wrote:

"The observation, however, is most unjust to them for, with the great populations of Bombay and Poona to feed within easy distance it so happens that the grain products...pay better than cotton or other exportable products....."29.

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28. The term was coined by P.H.M. Van Den Dungen and refers to a central feature of British policy in Punjab which was " the reliance on the loyalty of the agricultural classes, particularly the peasant proprietors". See Dungen (1972).

29. Banaji (1977)



In the Deccan as a whole the area under crops grown for sale varied between 40 and 60 percent in the talukas of the north and 20 and 33 percent in the talukas further south<sup>30</sup>.

The peasants usually depended on merchants and moneylenders to advance them the capital necessary for the cultivation of 'cash crops'. The fluctuations in prices (as, for instance, occurred when the high prices of cotton caused by the cessation of supplies of American cotton, due to the Civil War, came to an end) combined with the heavy land revenue demand resulted in many ryots losing their lands. This led to the Deccan Riots of 1875 in which moneylenders were attacked and their records destroyed. The Deccan Agriculturists Relief Act was passed, placing restrictions on the transfer of land for redemption of debt; still, according to the Famine Commission,<sup>31</sup> between 1875 and 1901 at least a quarter of the cultivators had lost their title to land<sup>32</sup>.

30. Ibid.

31. Patnaik (1981), P.35.

32. The phenomenon of land alienation continued even later. Between 1926-27 and 1936-37 five million acres, or more than twenty percent of the total land cultivated, had passed into the hands of moneylenders. The number of cultivators had declined from 1,930,000 to 1,761,000. The figures are taken from Bombay Land Revenue Administration Reports. See Sen (1962), P.145. Daniel Thorner, while examining the reasons for the failure of land reforms in the nineteen forties and fifties pointed to the fact that though Bombay had been in name a ryotwari region (in which land was to be with the cultivator), the actual circumstances had been quite different. Five percent of the registered holders had twenty percent of the land; the bottom forty percent had only ten percent of the land. See Thorner (1976; reprint 1981), P.45.

The new owners were, however, no more disposed to invest in agricultural improvement than the zamindars of Bengal had been: "... This facility of transfer proved, as is well-known, to be a two-edged weapon, and the class of people to which the land began to pass showed little disposition to devote themselves to land improvement or progressive agriculture; so that the result was to leave production stationary, while the cultivators who had unwittingly lost their lands through the unfamiliar action of the central courts felt a strong sense of grievance..".<sup>33</sup> Thus, even in the ryotwari regions, there was a class of 'ryotwari landlords' (to use Daniel Thorner's phrase) whose capital, in a period of growing commercialisation, rarely went into improving the process of production itself.

In Madras too there was a marked increase in the production of crops for sale. Though cotton had been grown in pre-British times, the Madras presidency was a net importer of cotton in 1800. By 1857-58, nearly one million acres out of a total of twelve million cultivated acres were under cotton. Around 55 million pounds of raw cotton were exported in that year. Again, the ryot frequently took a loan or an advance at the beginning of the season. According to the Madras Provincial Banking Enquiry Committee Report (1926 ), "It is common practice to take a loan on condition of repayment at harvest".<sup>34</sup>

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33. Keatinge(1931)cited in Patnaik (1981), P.35

34. Patnaik (1981), P.26.

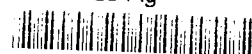
It has been argued by Dharma Kumar that there is no evidence to indicate that, in the Madras presidency, land was increasingly alienated to rich peasants and moneylenders during British rule; a large class of agricultural labourers, whose occupation was determined by their caste status, existed even in pre-colonial times. She points out that the the Lorenz ratio for ownership of land remained "remarkably static" from around 1853-54 to 1945-46 at a figure of about 0.6.<sup>35</sup> Kumar's position has been criticised by Utsa Patnaik who has pointed out that even if all members of 'untouchable' castes are assumed to be labourers, the proportion of agricultural labourers could not have been more than 12-15% of the rural population, whereas the census figures for 1921 and 1931 are 36.1% and 52.1% respectively.<sup>36</sup> Neeladri Bhattacharya<sup>37</sup> too has argued that the original supply of agricultural labour due to the caste structure must have been added onto due to the process of proletarianisation in the colonial period. He has suggested that under the pressure of

35. See Kumar, "South India" in Section II, "Agrarian Relations" in Kumar ed. (1982; reprint 1984), P.233

36. Patnaik, "Introduction" in Patnaik and Dingwaney ed. (1985), P.6.

37. Bhattacharya, "Agricultural Labour and Production: Central and South-East Punjab, 1870-1940" in Raj et. al. eds. (1985), P.157.

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high land revenue and repeated scarcities and famines, ryots may not have lost all of their lands (and lost what they did to larger landowners rather than non-agriculturists) but still may have been forced to rely on agricultural labour for much of their incomes. He has argued that impoverished ryots may have worked only as seasonal or daily labourers whereas the permanent labour force may have been largely from 'untouchable' castes, leading to an understimation of the proportion of agricultural labour. From our point of view, however, even if we accept that inequality in land-ownership did not increase, the fact remains that even when the settlements were initially made there was substantial inequality. There did exist a class of large owners who had the resources to invest; yet, again, capital went into moneylending, trading etc. but not into agricultural improvement. Though, as Dharma Kumar points out, there was some increase in yields in some regions<sup>38</sup>, the picture remains one of only increased commercialisation, without any systematic effort on the part of large owners to introduce output-raising innovations.

Trends in Punjab where, in the main, the Ryotwari system (or a variant in which a sub-group of leading landholders were responsible for the revenue payment) was introduced,

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38. Kumar, "South India" in Section III, "Regional Economy (1757-1857)" in Kumar ed. (1982; reprint 1984), P.367.

were not very different. Land alienation in the pre-colonial period may not have been legally banned but it was certainly very infrequent. However, after the eighteen-seventies, with the spread of irrigation, increasing cultivation of 'cash crops' and the increase in population, land transfers began to take place on a large scale. From 1866 to 1874 approximately 88000 acres were sold annually, on the average. From 1888-89 to 1892-93 annual sales averaged 338,000 acres.<sup>39</sup> Looking at the figures for land transfer between 1896-97 and 1942-43, Mridula Mukherji has estimated that approximately 0.5 percent of the land was being sold per annum. Over a period of about 50 years this would have led to the transfer of about 25 percent of the total cultivated area.<sup>40</sup> In 1924, 12.3 percent of the total of all landowners owned half the land; by 1939 they owned two-thirds and only the top 6.3 percent of owners held more than half of the land.<sup>41</sup>

While money was invested in land-purchase, however, land improvement was another matter. H. Calvert, an ICS (Indian Civil Service) officer, wrote in 1936: "Unfortunately, in

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39. Bhattacharya (1986), Ch. IX.

40. Mukherjee, "Commercialisation and Agrarian Change in Pre-Independence Punjab" in Raj et. al. ed. (1985), P.56.

41. Ibid, P.75

in this province very little of the capital which flows towards the land is devoted to its improvement... the investment of crores of rupees in land purchases does not of itself add an ear of corn to the wealth of the province".<sup>42</sup> The behaviour of large landowners was in fact a frequent cause for complaint among the British officials of that period: "Taking the province as a whole there is no doubt that the landlord is even a greater burden than the moneylender. The money-lender is no doubt an evil but till he can be replaced, he is a necessary evil. On the other hand, the landlord is too often a parasite living on his tenants, <sup>/wasting</sup> his substance and corrupting the neighbourhood".<sup>43</sup>

Perhaps the best example of the failure of British policy to provide an impetus for the development of capitalist farming comes from Punjab itself-in the 'Canal Colonies' of western Punjab. Soon after the annexation of Punjab in 1849 the British had realised that there was great potential for developing irrigation. Initially, canals were developed for a limited purpose. They were built to serve areas which already had some settled life; the canals mainly served the purpose of preventing

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42. Calvert (1936), P. 28

43. Darling (1925; reprint 1978), P.332.

famines in addition, of course, to earning revenue for the government. After 1880 a much more ambitious plan was conceived. Between the Jhelum, Chenab, Ravi and Sutlej rivers there existed large tracts of what was practically desert waste (known as bar). The area had virtually no settled population and was, in the words of an official of that period, "unrivalled in the world for its combination of the most disagreeable features a landscape is capable of affording".<sup>44</sup> The administration set itself the task of building a network of canals (to irrigate the bar regions) by harnessing the waters of the Jhelum, Ravi and Sutlej rivers. Immigrants were to be brought in from other congested parts of Punjab. The Deputy Commissioner of each district supplying colonists was told to ensure that only cultivators with a proven record of industry and enterprise were selected.<sup>45</sup>

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 44. Ibid, P.112

45. That these instructions were taken very seriously is evident from the following description in a memo written by Mr. J.A. Grant, Settlement Officer, Amritsar, 1893. Grant describes his inspection of the would-be colonists: "Walking down the row, I could easily see the men who were physically unsuitable. Many old dotards and mere boys would be brought in the hope of securing an extra square for the family.... His colour would often betray the habitual opium-eater.... Thus the original crowd of applicants would be reduced to a band of men all connected by common descent, all physically fit to take up a life in a new country under considerable difficulties, all hard up for land but with sufficient resources to start them." Ibid, P.116

The land was distributed in units which were called 'squares' which varied in size between 22.5 and 27.5 acres. The colonists could be divided into three categories: peasant grantees, nazarana<sup>46</sup> paying grantees and military grantees. Peasant and military grantees usually received a square or two each and the bulk of the land usually went to peasant grantees. Nazarana -payers could receive upto a few hundred acres. We wish to focus here on the nazarana-paying grantees of the Lower Chenab Colony. As mentioned earlier, colonists had been chosen with care. In the Lower Chenab Colony, in addition to the peasant grantees, two other categories of colonists, 'yeoman' and 'capitalists', had been identified. 'Yeoman' received upwards of a hundred acres whereas 'capitalists' usually got more than two hundred. There was a clear rationale for this pattern of selection. M.L. Darling, an ICS officer of that period explains: " In the case of the yeoman, it was intended to attract the pick of the larger peasant proprietors, men who by their wealth, energy or ability had raised themselves above their fellows, without ceasing to belong to the agricultural community and whose credit and resources it was felt

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 46. The peasant grantee had to pay land revenue, water rates and a yearly fee called malikana in recognition of the state's proprietary right. After a fixed period, usually ten years, the peasant could gain full property rights on payment of a small sum. The nazarana payer was a full owner; nazarana translates as "due paid on succession to a title". Here it refers to an annual payment made to the government as a sign of ownership of what had earlier been state property. See Paustian (1930), P.69.



would prove to be of value in the development of the colony".<sup>47</sup> As for the 'capitalists', " it was thought that a moderate infusion of the capitalist element would strengthen the colony, not only by providing natural leaders for the society but also by bringing in men of superior intelligence and wider outlook than the ordinary peasant proprietor."

The expectation was not without basis. The colonists had been brought from regions where they were familiar with the techniques of wet cultivation. Conditions were suitable for the cultivation of cotton and sugarcane for which there were good export markets. However, it was found that " with very rare exceptions, the last thing which the capitalist or yeoman contemplates is the spending of any large sum of money in the development of his grant".<sup>48</sup> Many of the large grantees in fact simply chose to be absentee landlords and did not bother about their estates at all. A report on the Lower Chenab Colony emphasised the problem of absenteeism: "In every way these nazarana paying grantees are unsatisfactory tenants of the government. Their endless disputes with their tenants and among themselves, their migratory habits, retarded rather than helped the pace of the colony's development. Similarly, capitalists and well-deserving

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47. Darling (1925, reprint 1978), P.118-119.

48. Ibid, P.119.

servants of the Government did not come upto the mark. Their absenteeism falsified the expectation that they would serve as leaders of the new society".<sup>49</sup>

The Canal Colonies did in fact subsequently become one of the most advanced and commercialised regions in Punjab. The percentage of total area under cotton alone varied between 10 and 20 percent in the different colonies.<sup>50</sup> However, the trend revealed early on in the Lower Chenab Colony continued and there was never in the colonial period any widespread tendency towards capitalist farming.<sup>51</sup> The case of the Canal Colonies provides us with what is probably the best example of the phenomenon we have been discussing; even with increased possibilities of production for sale, capital failed to go into agricultural improvement and techniques of production hardly improved.

#### Petty Tenancy in Colonial India:

We have described in some detail in the previous section how, in the colonial period, while crop production for the market expanded, there was very little growth of capitalist farming-in the sense of there being any sustained investment in agricultural production. Capital

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49. Paustian (1930), P.70.

50. Bhattacharya, "Agricultural Labour and Production: Central and South-East Punjab, 1870-1940" in Raj et. al. eds.(1985), P.152.

51. See Agnihotri (1977 ).

and

flowed into trading, moneylending and land purchase, but rarely into agricultural improvement. Cultivation continued at a low level of technique. In this section we focus on the manner in which the big landowners of this period chose to use their land. In particular, we draw attention to the fact that the practice of giving small plots of land out on lease to people who owned very small bits of land (or none at all) was extremely common. In this thesis we refer to this kind of tenancy arrangement as 'petty tenancy'. We also draw attention to the fact that there is no evidence to indicate that petty tenancy declined due to increasing commercialisation; if anything, the converse seems to have been true. The evidence we will be presenting below is extremely fragmented; scattered bits of evidence have been brought together to support our generalisations. This is however quite unavoidable because, as is well-known, reliable agricultural statistics for the colonial period are extremely difficult to come by.

To start with, a few summary figures indicating that the mere fact of prevalence of petty tenancy in the colonial period is not open to question are presented below. To quote K.N. Raj, " National Sample Survey data of the early 1950s show that as much as 70 to 75 percent of all agricultural holdings belonged to the small size-groups,

accounting in no part of India for much more than one-third of the total operated area. Leased-in area was generally not less than one-fifth of the total area in these small peasant holdings, in fact around two-fifths in some parts of the country like Madras and Punjab; it was in all probability much higher in the concluding decades of British rule, before land reforms conferring ownership rights on tenants were initiated."<sup>52</sup>

An earlier estimate using data on the colonial period itself has been provided by S.J. Patel.

Table I: Occupational Composition of Agrarian Society, 1931.

Item	Number in Million	Percent of Total
Total Agricultural Working Population of Which	111	100.00
I Rent receivers	4	3.6
II Cultivators with more than 5 acres.	28	25.3
III Cultivators with less than 5 acres.	37	33.3
(a) Tenants-at-will and Share-croppers	27	24.3
(b) Petty Proprietors	10	9.0
IV Landless Labourers	42	37.8

Item III (a) is of special interest to us. It indicates that in the colonial period as much as 24.3 percent of

<sup>52</sup>. Raj, "Introduction" in Raj et.al.eds.(1985), p.xi. Bardhan (1970) has pointed out that the average percentage of operated area leased in on operational holdings of less than five acres was 25.76 in 1953-54.

the agricultural population consisted of petty tenants<sup>53</sup> (who cultivated less than a total of five acres).

Regarding the relationship between the commercialisation of agriculture and the incidence of petty tenancy an interesting piece of evidence has been presented by K.N. Raj. We present it below in some detail. Raj uses data collected during the All-India Rural Credit Survey conducted in seventy-five districts of India in 1951-52. The districts were separated into three categories based on the extent of commercialisation of agriculture. These were:

(i) "subsistence regions in which the proportion of cash expenses to total expenses and of cash sales to the gross value of produce were relatively low among the cultivator families"

(ii) "monetised regions" in which these proportions were significantly higher but the relative share of 'cash crops' as traditionally understood (namely cotton, jute, sugar-cane, tobacco, oilseeds etc.) was quite low in the net sown area

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53. Patel (1952). The figures are largely from the Reports on the Census of India. An important caveat must be noted; the division between items (a) and (b) in item III is really on the basis of an educated guess by Patel. Apparently, the data available were only for the proportion of cultivators having less than five acres and for the proportion of cultivators who were share-tenants or tenants-at-will. An estimate of the proportion of tenants at-will who had less than five acres permitted the division of the group of cultivators with less than five acres into 'petty proprietors' and 'tenants-at-will'.

(iii)"commercialised and monetised regions" in which (in addition to the conditions stated in (ii) above) the share of 'cash crops' in the net sown area was also high. Raj ignores the distinction between regions (ii) and (iii) because, he correctly points out, food crops too could be grown for sale, thereby making the distinction between 'monetised' and 'commercialised and monetised' regions spurious. He, therefore, clubs regions in (ii) and (iii) together as 'commercialised' regions and compares them with the 'subsistence' regions.

Two of Raj's findings are of special interest to us. Firstly, Raj noted that the share of the top decile of cultivator families in the total area under operation was in general higher in the subsistence regions (averaging around 40 percent) than in the commercialised regions (where the average was around 35 percent). For instance, in 'Bihar-Bengal' and 'Orissa and East Madhya Pradesh', which were subsistence regions, the top decile of cultivators cultivated about 40 percent of the operated area while in 'Assam-Bengal' and 'Punjab-Pepsu' (commercialised regions) they cultivated less than 28 percent. Secondly, Raj found that "the average rent paid in cash and kind to landlords and co-sharers by cultivator families as a whole, expressed as a percentage of the average value of their gross produce was nearly

twice as high in the commercialised regions as in the subsistence regions".

Raj concluded : " Even though data are unfortunately not available on the proportion that leased-in land formed of the total area in the operational holdings of cultivator families in the subsistence or commercialised regions, it appears from the above that the preference for leasing out land was less in the subsistence than in the commercialised regions and, correspondingly, the tendency to organise cultivation directly was stronger in the former."<sup>54</sup> This conclusion lends weight to our argument to the effect that in a period when, with growing commercialisation, capital flowed into usury, land purchase etc. but not into agricultural production, leaving the techniques of production more or less unchanged, petty tenancy may have been an 'economically rational' option. However, Raj himself does not outline the chain of reasoning that actually leads to this conclusion from the data he presents. We proceed now to address this task.

Consider the second finding cited above. If the proportion of average gross produce paid as rent is twice as high in the commercialised regions as compared to the subsistence regions, it is likely that leased in area as a proportion of total operated area is higher in the commercialised regions than in the subsistence

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54. Raj, "Introduction" in Raj et.al.eds.(1985),P.xiv.

regions. The point can be illustrated with a numerical example in which we assume the contrary and argue that the conclusion which follows is unreasonable.

Suppose the proportion of leased-in area (in total operated area) is the same in the two regions. Let us suppose that it is (say) 40 percent. Suppose also that in both regions there is no difference in the productivity of owned and leased-in land. Suppose the proportion of average gross produce paid as rent in the subsistence region is 20 percent (say). In keeping with Raj's finding, we would have to assume that this proportion was 40 percent in the commercialised region. Consider now what the rental proportion (that is the proportion of produce which is given as rent) on leased lands turns out to be in the two regions. In the subsistence region, 40 percent of land which is leased is giving 20 percent of the average gross produce of the entire region as rent. Since we have assumed that there is no difference in productivity between owned and leased land, it follows that 40 percent of the average gross produce of the region must have been produced on the leased land. It follows that half of the average gross produce on the leased land is being given as rent. In the commercialised region too, since the assumption of equal productivity on owned and leased land has been



made, the 40 percent of leased land would have yielded 40 percent of the average gross produce of the region as a whole. But here, 40 percent of the average gross produce of the region is being given as rent. This would imply that the entire output on leased land is being given as rent. Thus, by assuming that the proportion of leased land is the same in the commercialised and the subsistence regions, we have been led to conclude that the rental proportion on leased land is twice as high in the commercialised region as in the subsistence region. For example, if share tenants paid  $\frac{2}{5}$  share to landlords in the subsistence region, tenants in the commercialised region would have paid  $\frac{4}{5}$ . Since this does not, on the face of it, seem reasonable we must conclude that our initial assumption, that the proportion of leased-in area in total operated area in the two regions was the same, was off the mark. We must conclude instead that the proportion of leased-in area in total operated area was higher in the commercialised region. We must note that if we were to make the other (logical) extreme assumption, that the rental proportions on leased area in the two regions were the same, we would conclude, in light of Raj's evidence, that the proportion of leased-in area in total operated area was twice as high in the commercialised region as compared to the subsistence region. It is possible that average rent

as a proportion of average gross produce in the commercialised region was twice as high as in the subsistence region because both the proportion of leased-in area in total operated area as well as the rental proportion were higher in the commercialised region, though not twice as high in either case.

Even though our argument above yields some inferences about the relative extent of leasing out of land in the commercialised and subsistence regions (and, perhaps, about the average rental proportions on leased land) it does not say any thing about the direction of leasing i.e. whether the lessors and the lessees were big or small landowners. The first finding cited above is of some slight use in this respect. If big owners in the commercialised region were more inclined towards direct cultivation than big owners in the subsistence region, what could we expect about the distribution of operational holdings in the two regions? Assume for a moment that land is distributed in an identical manner in the two regions. Suppose the top decile of owners own the same proportion of land in the two regions. If in the commercialised region they have a greater propensity to go in for direct cultivation, one may expect that the top decile of cultivators would have a higher proportion of operated area in the commercialised region than in

the subsistence region. As we have seen earlier, the data reveal quite the opposite; the top decile of cultivators hold a smaller proportion of the total operated area in the commercialised regions. We may, therefore, tentatively come to the following weak but not entirely useless proposition: large owners in the commercialised regions were not more inclined to cultivate directly than large owners in the subsistence regions.

We may now draw our threads of reasoning together. We have tentatively arrived at the following conclusions:

- (i) a larger proportion of operated area may have been leased-in in the commercialised regions
- (ii) a larger proportion of output on leased-in land may have been demanded as rent in the commercialised regions
- (iii) large owners in the commercialised regions were not more inclined to cultivate directly than large owners in subsistence regions; if any thing more definite is to be concluded from our data, it would be the converse of this.

These three propositions are surely at least consistent with our view that with the onset of commercialisation big owners may have often preferred to lease out land to petty tenants instead of cultivating directly with hired labour. Proposition (iii) is of course part of our

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argument in a weaker form. Proposition (i) /reasonable to expect if big owners in the commercialised regions had a greater tendency to lease out land. And if much of the leasing out was to petty tenants, who, it is well known, were usually charged extremely high rents, proposition (ii) would follow.

The above argument is, of course, not in any sense conclusive. There is, however, a fair amount of evidence of a mainly qualitative sort which points in the same direction. It must again be stressed that the evidence is, of necessity, very fragmented; stray references in several different accounts have been cited below. Also, most of the evidence presented pertains to Bengal and to Punjab. Fortunately, since these were regions in which production of crops for sale did expand considerably in the colonial period, the data are extremely relevant for our problem.

The expansion of tenancy alongside the process of commercialisation of agriculture is no where more evident than in the case of Punjab. This fact was recognised very early on by Calvert<sup>55</sup> who noted quite explicitly in 1922: "Tenancy is increasing and its influence on economic development will increase rapidly as the commercial view of agriculture becomes more widespread." The following figures also illustrate this trend.<sup>56</sup>

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55. Calvert (1922), P.86.

56. Mukherjee, "Commercialisation and Agrarian Change in

Table I: 2 Growth of Tenancy in Punjab, 1887-1937

Years	Percentage of Area under Tenants-at-will	Percentage of Area under Occupancy Tenants	Percentage of Area under Self-cultivating Proprietors
1887-88	28.3	10.3	60.7
1936-37	48.8	8	41.6

There was a clear preference for share-tenancy (over fixed rents) and this preference was growing. In 1887, 62.5 percent of the area under tenants -at-will had been under share-tenants; the proportion had gone up 76.1 percent by 1936-37. Meanwhile, the proportion of area under tenants-at-will under cash rents had declined from 29.6 percent to 15.2 percent.<sup>57</sup> These figures in themselves of course do not establish who was leasing out and who was leasing in. Fortunately, the available data on distribution of owned and operated holdings in Punjab have been analysed by Mridula Mukherji for precisely this purpose. Mukherji used two studies by Calvert, The Size and Distribution of Agricultural Holdings in the Punjab (1925) and The Size and Distribution of Cultivators' Holdings in the Punjab (1928). These studies gave district-wise figures for the percentage of cultivators and

56. (Contd.) Pre-Independence Punjab" in Raj et. al. eds. (1985), P.56.

57. Ibid, P.75.

the percentage of owners who fell into each size-category but not for the percentage of total area owned or the total area operated in each size-category. For instance, they would reveal that in district 'X' 10% (say) of the owners owned between five and ten acres but would not say what proportion of the total land was owned by people having between five and ten acres. To get this figure Mukherji simply multiplied the mid-point of each size-group by the number of holdings in that size-group and then calculated the percentage that this formed of the total area. She found (see table below) that, above the 25 acre level, in each size group more land was owned than was cultivated and, below this level, in each size-group more land was cultivated than was owned. This would tend to indicate that larger owners were leasing out land and smaller owners were leasing in land. The figures for British Punjab as a whole are given below.<sup>58</sup>

Table I:3 Percentage of Area Owned and Operated in Various Size Categories ..

Size-Group	Percent of Area owned by Owners Having Holdings Falling in the Relevant Size-group.	Percent of Area Operated by cultivators Having Operated Holdings Falling in the Relevant Size-group.
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1. 1-5	11	12.1
2. 5-10	15.1	20.6
3. 10-15	11.5	17.4
4. 15.-20	8.4	12.3

58. Ibid, P.70.

1.	2	3
5. 20-25	6.8	9.1
6. 25-50	20.4	18.5
7. 50 +	25.7	7.9

It can be seen that 46.1% of the land was owned by owners having in excess of 25 acres but only 26.4% of the land was operated by cultivators operating in excess of 25 acres.

A possible objection to the above argument could run as follows. It may be pointed out that if a single owner had several scattered plots of land he would have tended to cultivate less land than he owned. He may not have had a preference for leasing out land, but may have been forced to do so since his land was fragmented. This is certainly a valid point; our conclusions would, therefore, be slightly suspect if they relied only on the data presented above. However, there is unambiguous qualitative evidence also in support of our contention. Commenting on the propensity to lease out land, Calvert wrote in 1922: "Punjab is not singular in the small size of its holdings. Where it seems to be peculiar is that the owners prefer to cultivate smaller portions of

land than they need. It is probably correct that any owner of more than 25 acres lets part of it out to a tenant. There is no effort to achieve large-scale farming even by those who can do it on their own land. Similarly, tenants seldom attempt to cultivate more than twenty-five acres, although more may be available. If anyone obtains a lease of more than 25 acres he sublets a portion of it."<sup>59</sup>

The tendency to lease out land was also commented upon by Malcolm Darling in a discussion of the impact of increases in the prices of agricultural products. Darling wrote<sup>60</sup>: "In this case it may be doubted..... whether in a hot climate material gain is in itself a sufficient incentive for for harder work....The result is the tendency noted by Mr. Calvert 'to reduce the area cultivated if the same profits can be made from a smaller area'. Mr. Keatinge noted the same tendency in the Bombay Presidency.....In both cases the tendency was evidently due to the higher prices which made it possible for many to satisfy their meagre requirements by living on the higher rents that higher prices bring, instead of cultivating the land themselves, as they were obliged to do before in order to make both ends meet." It is clear from Darling's comment that in the

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59. Calvert (1922), P.75. It may be argued that tenancy may have grown in Punjab because land passed into the hands of maneylenders of non-agricultural origin



economic conditions prevailing in rural Punjab the first chance to become a rentier was quickly grasped. We need not, of course, worry too much about his views regarding the climate and its impact.

It is also striking to note that the figures for tenancy were extremely high for the Canal Colonies in which the likelihood of fragmentation of land was much less than in other regions, since the colonists had been allotted compact plots of land. These figures are

presented below.<sup>61</sup>  
 TABLE I: 4 Percentage of Operated Area under Tenancy; Canal Colonies.

Colony	Proportion of Operated Area under Tenancy.
Lyallpur	48.%
Jhelum	45%
Shahpur	61%
Jhang	65%
Multan	74%
Montgomery	79%

Regarding the direction of leasing, in each of these colonies more land was owned in sizes in excess of

59. (Contd.) thereby implying that 'non-economic' factors could account for this phenomenon. The argument will not hold water because in Punjab, especially after 1900 (when an act was passed placing restriction on land transfer to non-agriculturists) the credit market was increasingly dominated by agriculturists moneylenders. See Bhattacharya (1986), Ch. VIII.

60. Darling (1925; reprint 1978), P. 143.

61. The figures are from the Report on the Land Revenue Administration of Punjab (1922). See Bhattacharya (1983)

twenty five acres than was cultivated in these sizes.<sup>62</sup>  
 Percentage of Area Owned and Operated in the  
 TABLE I:5 Size-group 'Greater than 25 acres', Canal Colonies.

Colony	Proportion of Land Owned by Owners Having more than 25 acres	Proportion of Land Operated by Cultivators Operating More than 25 acres.
1. Jhelum	23.6	7.6
2. Shahpur	61.3	37.2
3. Multan	70.0	41.7
4. Jhang	70.5	26.4
5. Mantgomery	55.8	22.0
6. Lyallpur	66.5	57.9

It must be mentioned that in the case of Shahpur, Multan and Jhang, in the size-group 25-50 acres, the proportion operated was greater than the proportion owned. On the face of it this may seem to indicate that cultivators owning twenty-five to fifty acres were leasing in land and probably cultivating with hired labour. This may, however, be an incorrect inference because, in the Canal Colonies where extensive (as opposed to intensive) cultivation was practiced, a fairly large sized plot may have been required to fully utilise family labour. If in the rest of Punjab, leasing out began once the size of the owned area exceeded 25 acres (as indicated in our

62. Computed from Mukherjee, "Commercialisation and Agrarian Change in Pre-Independence Punjab" in Raj. et.al.eds.(1985), P.68.

quotation from Calvert) the corresponding cut-off point may have been much higher for the Canal Colonies. If our argument is correct, it of course follows that in the fifty-plus size group more area should be owned than operated. This was in fact the case in virtually all the Canal Colonies. The one exception is Lyallpur in which 30.9 percent of the land was owned in size-groups in excess of 50 acres, but 31.2 percent was cultivated in size-groups in excess of 50 acres. The great experiment of the British had thus led to the development of a class of big landowners who not only did not attempt to improve their lands but were by and large content to lease it out and live off the rent.<sup>63</sup>

With regard to tenancy in Punjab, it is imperative to note an important argument advanced by N. Bhattacharya, whose work we have already referred to frequently. Bhattacharya has argued that in the literature there has been a tendency to view tenants as invariably being petty tenants under the grip of the landlord, or money-lender-merchant etc. He points out that the error is made by theorists with differing viewpoints; it is committed by both the theorists who see some regions in

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 63. In the early years of colonisation, it may have been true that large owners were forced to lease out land due to a scarcity of labour. In subsequent years, however, this problem was eliminated due to immigration into the Canal Colonies. See Bhattacharya(1983)

India as 'semi-feudal' in present times as well as others who find evidence of capitalist penetration in the colonial period itself.<sup>64</sup> Bhattacharya cites evidence to show that tenancy was not necessarily petty tenancy, especially in Central Punjab (which corresponds to Indian Punjab of today). Among other pieces of evidence, he cites the following data from village surveys.<sup>65</sup> The computational method used by Bhattacharya is the same as that adopted by Mridula Mukherjee while presenting similar data; we have earlier described this procedure.

TABLE I: 6. Percentage of Area Owned and Operated in Size-group 7.5-50 acres, in Six Villages in Punjab.

Name of Village	Proportion of Land Owned in Size-group 7.5-50 acres.	Proportion of Land Cultivated in Size-group 7.5-50 acres.
1. Tehong	27 %	61 %
2. Gaggar Bhana	62 %	86 %
3. Suner	50 %	78 %
4. Bhadas	60 %	65 %
5. Jamalpur Sheikhan	32 %	79 %

The table clearly reveals that owners in the size-group 7.5-50 acres were net lessees. This is also generally true for each of the sub-groups within the range 7.5-50 acres. Bhattacharya also points out that owners in the size-group 0-0.75 acres were net lessors.

64. The reference is to Bhaduri (1973a and 1973b) and Banaji (1977).

65. Bhattacharya (1983).

Bhattacharya's data may at first sight seem to contradict our argument-it may seem indicative of the existence of large scale cultivation. However, it is again striking to note that even for these villages when land was owned in sizes in excess of fifty acres, more was owned in such sizes than was cultivated, indicating that the land was being leased out to people with less than fifty

acres. The figures are given below.

I:7. *Percentage of Area Owned and Operated in Size-group 'Greater than 50 acres' in Six Villages in Punjab.*

Name of Village	Proportion of Land Owned in Size-group 'greater than 50 acres.'	Proportion of Land Cultivated in Size-group 'greater than 50 acres.'
1. Tehong	-	-
2. Gaggar Bhana	1	-
3. Suner	3	-
4. Bhadas	0.4	-
5. Jamalpur Sheikhan	3	0.4

Bhattacharya's own guess regarding the pattern of leasing is also not inconsistent with our position. He writes: "Assuming a relatively adequate control over capital resources, the extent of khudkasht within the peasant family may be related to the number of working members within the family. Compared to cultivation with family labour, extended production on the basis of hired labour tended to bring a lower return per acre....

Rich peasants, whose ownership holdings were much larger in relation to family size, leased out part of the holding, retaining the best land for self-cultivation. Those with smaller plots and surplus family labour leased in."<sup>66</sup> It may be noted that Bhattacharya is making a comment to the effect that family labour is less expensive than hired labour but is not saying anything about the choice between cultivation with hired labour and leasing out to a small tenant. In fact his assertion that rich peasants, who have more land than can be cultivated with family labour, usually choose to lease out the extra land would tend to make us suspect that leasing out land to small tenants may be a better option than cultivation with hired labour. Bhattacharya himself confirms this suspicion when in another article he writes: "Within this social context debt peonage and petty tenancy could exist as potential forms of labour exploitation which in many ways appeared to be more lucrative than the employment of permanent wage-labour. The rich peasant or landowner who wished to extend control over the process of production specified the crops to be produced..... the threat of ejection could be used as an effective mode of control over the process of production."<sup>67</sup>

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66. Ibid,

67. Bhattacharya, "Agricultural Labour and Production: Central and South-East Punjab, 1870-1940", in Raj et.al.eds.(1985), P.123

There is a remarkable similiarity between the above account and the descriptions of the choices made by the jotedar of Bengal who, as we noted earlier, grew in importance and went in for a range of activities (barring investment in agricultural improvement itself) in order to maximise his profits The Floud Commission pointed out:" While there are undoubtedly a large number of upper peasantry who employ regularly two or three farm hands and many who would take on seasonal labour for the harvest, it would probably be a mistake to believe that there is as yet any widespread capitalist farming other than through bargadars .....the general proposition remains true that the successful peasant who manages to improve his position either sublets his holding and becomes a rent receiver or else sublets just so much of it as he is unable to till with the aid of his family."<sup>68</sup> It is clear from this comment that share-tenancy was not an option chosen because of lack of concern for monetary return but because in fact it was the most profitable arrangement. The fact of wide-spread existence of share-tenancy in Bengal in the late colonial period is confirmed by several different enquiries.<sup>69</sup>

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68. Ghosh and Dutt (1977), P. 91

69. Ibid, P. 118

TABLE I: 8 Percentage of Area Under Share-cropping in Bengal

Source	Coverage of Enquiry.	Year	Percentage of Area under Share-cropping.
1. Floud Commission	Bengal	1938	20.0
2. Bengal Famine Enquiry (ISI)	14 districts of Bengal	1944	27.0
3. Plot to Plot Enumeration of Bengal (Deptt. of Agriculture, Government of West Bengal).	Bengal	1944	39.3
4. Bengal Rural Survey (ISI)	Bengal	1946	24.7
5. West Bengal Rural Survey (ISI)	West Bengal	1952	35.2

Note: ISI here refers to the Indian Statistical Institute, Calcutta.

The fact that this share-tenancy was predominantly petty tenancy i.e. the leasing in was either by landless peasants or peasants with very little land, comes through in the following table.<sup>70</sup>

TABLE I: 9 Ownership Holdings of Share-Tenants

Area Owned in acres.	Percentage of Area Share-Cropped to Area Cultivated in Each Group.	Percentage of Area Share-Cropped by Each Group to Total Share-Cropped Area.
1. 0	100.00	40.7
2. 0-1.1	69.1	15.6

70. Ibid, P. 118.



	1	2	3
3. 1.1-3		37.8	24.3
4. 3.1-5		20.3	9.4
5. Above 5		12.6	10.0
Total		39.3	100.0

It is clear that more than 80 % of the land under share-tenancy was leased in by those owning less than 3 acres.

The link between commercialisation and the growth of share-tenancy comes through quite explicitly in the following comment made by the Bengal Provincial Kisan Sabha, in a memorandum submitted to the Flood Commission, in 1940. Speaking of our 'go-ahead businessman's (jotedar's) preference for share-tenancy they write: "To a landlord of his type the receipt of produce rents has every advantage, not only is the higher rate well worth the extra trouble of assessing and collecting his half-share but, and this is most important, this new type of landlord is already a trader in grain or jute,.... he is rationalising his business vertically. Consequently we find that amongst the new landlords it is the usual practice to have their lands cultivated by share-croppers..... the rate at which the area under cultivation by bargadar's increases is very

significant of the change that is overtaking agriculture in Bengal and is the method adopted by the new landlord class as a whole to extract for themselves a still greater portion of the profit during a period when, for a number of reasons, profitability is falling!<sup>71</sup> It may be noted that a similar method had also been used much earlier by the indigo planters in the mid-nineteenth century. The planters tried to get the tenant to grow indigo by either becoming an overlord or by trying to usurp his occupancy right. There was often nothing to be gained from evicting the ryot and cultivating directly: "...so long as the ryot planted certain amounts of indigo he could retain use of the little farm, paying the rent as before but unless he did this the planter would order him off and put in another tenant who would produce indigo!"<sup>72</sup>

Several instances of a sort slightly different from the ones cited above are also of interest to us. In the above examples from Punjab and Bengal, the rich peasant or the jotedar was himself a moneylender as well as a trader and tenancy was an optimal arrangement for him. In other instances the advance came from European entrepreneurs or traders who initiated the change in crop-mix towards 'cash-crops'. It is striking to note that the zamindar seems to have remained content with the tenancy arrangement in the changed situation. We have already seen that this was

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71. Ibid, P.72

72. See Buchanan, The Development of Capitalist Enterprise in India, cited in Ghosh and Dutt

true for the zamindars of Bengal. The cultivation of indigo in the North-Western Provinces in the late nineteenth century is another illustration of this.<sup>73</sup> In Furrukhabad some 50 indigo concerns operated with about 150 factories in the district. The European entrepreneurs were able to work through the pre-existing arrangements, through the familiar system of providing advances to the ryots when they needed them most. The company specified the area to be sown and the and the quality of produce. A fixed sum was to be delivered at a pre-specified price. Apart from employing a few peons to supervise the cultivation, the job was left to the peasant. The zamindars do not seem to have been motivated to organise production directly with hired labour; the prevailing arrangement seems to have suited them well.

A study of sugarcane cultivation in Gorakhpur district of Eastern U.P. (in the period 1880-1920) provides further evidence on this point. The cultivation of sugarcane again took place under a system of advances; the European firms were content to let the dependent peasants produce the crop entirely on their own. As the

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72 (Contd.) (1977), P.35. It must be mentioned, however, that the choice was not always clear-cut; direct cultivation with hired labour was sometimes undertaken. Buchanan, however, does point out while this was resorted to in order to maintain control over operations, it was generally more expensive than the option of purchasing the plants directly from the ryot

73. Whitcombe (1971), P.171

author puts it, " Hypothecation of gur was an essential aspect of the production process as well as of the exchange relationships between the smaller peasants and an integrated set of surplus appropriators - landlords, moneylenders, merchants, the state and even the richer sections of the peasantry itself".<sup>74</sup> Again, as the comment above indicates, the tenancy arrangement was consistent with the interests of the big landowner, despite the extensive production of a crop for sale.

We are now in a position to bring together the different threads of our argument. To conclude this chapter we will simply re-state each of the three general propositions we have attempted to advance. We pointed out initially that, concomitant with its view of Indian agriculture as a source of primary products for Britain's rapidly industrialising economy and also as a major source of land revenue, the colonial state in its policy with regard to land settlement, irrigation etc. hoped to encourage the development of capitalist farming in India. We went on to indicate that Indian agriculture did undergo some very important changes-principally in the direction of increased production of crops for sale and the development of a market for land. Capitalist farming itself, however, developed only in isolated pockets. Money flowed into land purchase, usury, trade-

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74. Amin (1984)

but rarely into agricultural improvement. The techniques of cultivation did not improve to any significant extent. Finally, we pointed to the fact that in the colonial period landowners frequently seem to have preferred to lease out land to petty tenants rather than cultivate it directly with hired labour. In particular we pointed out that in the more commercialised regions where the market for the produce was highly developed (and, typically, the land market also) petty tenancy (especially share-tenancy) was frequently the preferred option. In the next chapter we will turn to an investigation of the experience with respect to petty tenancy in independent India. After discussing the impact of land legislation, we will turn to a discussion of the experience with respect to petty tenancy in the context of new developments which represented a clear break with the trends of the colonial period. Essentially we will discuss the changes which took place with respect to the mode of labour-use chosen by landowners in a phase when capital was not merely advanced with a view to acquiring produce or for buying land, but was invested directly, transforming the techniques of production themselves.

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CHAPTER TWO  
LAND REFORMS, AGRICULTURAL IMPROVEMENT  
AND PETTY TENANCY IN INDEPENDENT INDIA

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We have seen in the first chapter that, in the colonial period, even though agriculture became much more commercialised, capital was rarely invested in production itself, and cultivation continued to take place at a more or less unchanging level of technique. We also noted that, in this context, the socio-economically dominant large landowners frequently found the option of leasing out their land to small tenants very profitable. Daniel Thorner has put it: "Taking India as a whole, there was no visible class of capitalist producers—only some pockets in exceptional areas. Usually there was more money to be made, and less botheration, from rent (by giving the land on a crop-share, generally 50-50) than from trying to manage the land personally for capitalist-style profit."<sup>1</sup>

The propensity of big landowners to lease out their land to small tenants has, however, been altered by two major sets of changes which have taken place in the agrarian scene in independent India. The first of these has been the passing of land

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1. Thorner (1976), P. 16

reform legislations in different parts of the country. The second change has involved the introduction of a completely new technological 'package' (along with the necessary infra-structural support) into Indian agriculture, transforming the techniques of cultivation (and the profitability of agriculture as such) to varying degrees in different parts of the country. In the first section we discuss the impact of the land reform legislations on petty tenancy. Basically, we argue that petty tenancy did decline due to the land reform legislations; however, it was by no means eliminated. Substantial scope remained for its retention through a variety of legal and extra-legal means. In the second section we examine the impact of the "Green Revolution" technology. We argue that even though, in many instances, the tenancy arrangement has been able to adapt and accommodate the new technology, a large number of evictions (of small tenants) have occurred after its introduction. Petty tenancy still survives in various modified ways even in advanced regions, but the tendency to opt for it has diminished after the introduction of the new technology. Much more frequently than before, big landowners are choosing to cultivate with hired labour.

Land Legislation and Petty Tenancy

The rentier-lifestyle came under attack soon after India attained independence. During the colonial period itself, nationalist writers had argued that the British had created a class of parasitic landlords, who were merely living off the peasantry, and contributing little to agricultural growth. It was clearly recognised that agrarian reforms were necessary, if the stagnation of the British period was to come to an end. Moreover, politically, big landowners had frequently been supporters of the Raj, under the patronage of which they had prospered; they were, therefore, a natural target when independence was attained. The peasant movements in Telangana and in Bengal (the 'Tebhaga' movement) in the early years after independence also influenced the attitude towards the land question. There was an awareness that agrarian tension may reach unmanageable proportions if reform measures were not initiated quickly. The U.P. Zamindari Abolition Report (1948) argued: "If abolition(of zamindari) is held over for a few years, abolition may mean expropriation without compensation and with bloodshed and violence!"<sup>2</sup> Accordingly, laws were

2. The report went on to point out, in the words of J. Laski, that "to the threat of revolution there is historically only one answer, viz. the reforms that give hope and exhilaration to those to whom the revolution otherwise holds an irresistible appeal". See Joshi (1975), P.90. For a brief discussion of the motives behind land legislation in India and Pakistan, see Joshi (1974), Part I, P.105-107.



passed in many states which, at least ostensibly, sought to confiscate lands which were not themselves cultivated by landowners. Legislations to protect the rights of tenants were also passed in various states.

It may be appropriate to consider some illustrations.<sup>3</sup> Take, for instance, the case of Hyderabad. The main tenurial arrangement prevailing in the colonial period was the Jagirdari system. The Jagirdar had the right to collect revenue in his estate and was also responsible for the administration of his territory. The jagirs were taken over by the state after the Jagir Abolition Regulation was passed in 1949. In 1950, the Hyderabad Tenancy and Agricultural Lands Act was passed. The Act specified that tenancies were to run for a minimum of five years and tenants could not be evicted in the meanwhile, unless they neglected the land, or failed to pay rents. A category of 'protected tenants' was also established, who had a permanent <sup>land</sup> heritable right to the land. They could be at all ejected only on non-payment of rent or if they indulged in sub-letting. The landlord was permitted to resume for self-cultivation an area upto five times an 'economic holding'; an 'economic holding' was defined as ' the minimum area of

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3. This account relies heavily on Sen (1962), P.216-218.

average family of four or five persons, including himself, in reasonable comfort'. To take another example, the Bombay Tenancy and Agricultural Lands Act of 1948, which was subsequently amended several times, recognised three types of tenants: 'permanent', 'protected' and 'ordinary'. 'Ordinary' tenants were to get leases for at least ten years, but could be evicted if the landlord wanted to resume the land for self-cultivation, subject to a maximum of fifty acres. 'Protected' tenants too could be evicted on the same grounds but they were given the right to buy the land they cultivated, subject to their leaving the landlord a minimum of fifty acres. Also, theirs was a heritable right; upon a tenant's death his heir automatically received the land on the same terms. 'Permanent' tenants could be evicted only if they failed to pay the rent. Similar legislations, with the same broad objectives of eliminating intermediaries between the state and the cultivators and protecting the rights of tenants, were also passed in other states.

Had the legislations been implemented to the point where their stated aims were achieved, it may have been expected that the proportion of land under tenancy would decline due to tenants gaining ownership of the lands they were cultivating. This did happen, but to a very limited extent. By 1961, only three million tenants

(in the country as a whole) had acquired ownership rights on the lands they were cultivating. The total area that had been thus acquired was only 5.6 million acres. Even of these, two million acres were in Uttar Pradesh, where the gainers were former (socio-economically powerful) occupancy tenants rather than former tenants-at-will or share-croppers. Of the remaining 3.6 million acres, 3.1 million were in Gujarat and Maharashtra alone.<sup>4</sup> On a much larger scale, however, big landowners sought to combat the threat to their positions by simply evicting tenants, using means both legal as well as illegal.<sup>5</sup> The legislations passed usually had a provision for retention of land that was under self-cultivation; this provision was exploited to full measure by landlords in different parts of the country. For instance, the Bihar Land Reforms Act of 1950 declared: "On and from the date of vesting, all lands used for agricultural or horticultural purposes which were in khas possession of an intermediary on the date of such of vesting shall

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4. Parthasarathy (1978), P.346, footnote no.43
5. The twelfth session of the All-India Kisan Sabha had alleged: "A concerted and pernicious offensive is being carried on all over India by landlords supported by the government, who are driving out peasants from the lands they have been tilling.... The present eviction drive is part of the tactics resorted to by the landlords to deprive the peasants of even the limited rights won by them through land legislation in various states." See Sen (1962), P.242

be deemed to be settled by the State with such intermediary and and he shall be entitled to retain possession thereof and hold them as raiyat under the State...". The Act also stated: "'Khas possession" refers to land cultivated personally by an intermediary or by his own stock or servants or by hired labour or with hired stock.'<sup>6</sup> It is striking to note that the Act explicitly permitted the retention of lands which were cultivated by servants or by hired labourers with their stock. The result was that landlords simply evicted thousands of tenants who had no legal proof of their occupancy and were able to retain these lands on the grounds, that they were in 'khas possession'.<sup>7</sup>

The case of Bihar, though an extreme one, is by no means unique. An enquiry into the impact of the Bombay Tenancy and Agricultural Lands Act of 1948 (which we have earlier described) concluded: "Tenants in possession of land in 1948-49 continued to retain their possession only to the extent of 58.1 percent of the tenanted area. In 3.2 percent of the area, tenants acquired ownership. The rest of the area i.e. a little less than 40 percent was either resumed by owners and brought under cultivation or else the tenant was dispossessed and replaced by another

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6. Januzzi, "An Account of the Failure of Agrarian Reforms and the Growth of Agrarian Tensions in Bihar: 1949-1970" in Frykenberg ed (1974), P.218-219.

7. Ibid.

tenant. In the vast majority of cases, no recourse to law was had and tenants surrendered their land because the landlord wanted it back."<sup>8</sup> An enquiry conducted in the ex-jagir areas of Hyderabad, in 1954-55, came to a similar conclusion. We cite the findings below.<sup>9</sup>

TABLE II: PROTECTED TENANCY IN JAGIRDARI AREAS

Out of Every 100 Protected Tenancies Created in 1951.      Out of Every 100 Acres of Protected Tenancy Created in 1951.

1. Still Remaining	45.39	49.82
2. Purchased	12.42	14.94
3. Voluntarily Surrendered	17.83	20.76
4. Legally evicted	2.58	1.96
5. Illegally evicted.	22.14	12.62
6. Others	0.12	0.006

The figures show clearly the very small proportion of tenanted land purchased (by the tenants themselves, presumably) and the large proportion from which tenants were evicted or 'voluntarily surrendered' land. Similar data are available for Punjab. In Punjab, the Punjab Security of Land Tenures Act was passed in 1953 and subsequently amended, in 1955; again, however, an

8. These facts were revealed in a survey conducted by the Gokhale Institute of Politics and Economics covering the period 1948-49 to 1952-53. Sen (1962), P.221

9. Khusro, 'On Land Reforms' in Desai ed.(1969),P.442

evaluation study concluded: " The law regarding the security of tenants seems to be somewhat illusory." The total number of tenants holding land in Punjab declined from 583, 400 in 1955 to 80,250 in 1964.<sup>10</sup> A final illustration presents our point of view even more unambiguously; the authors of a study of the impact of land reforms in Baroda district (Gujarat) made the following observations on security of tenure :

(i) "There has been a sharp rise in the area under personal cultivation between 1948-49 and 1951-52, and a corresponding decline in the area under tenancy, thus indicating a large-scale eviction of tenants on the eve of the application of the Acts to the Baroda district and in the initial years following their enactment."

(ii) "Most of the cases of termination of tenancy in the years 1949-50 to 1953-54 arose out of the demand for the land by landlords for personal cultivation."

(iii) "There are reasons to believe that the personal cultivation for which the landlords terminated tenancies was not genuine."<sup>11</sup>

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10. Planning Commission (1966), P.116, cited in Ladejinsky (1967)

11. Kolhatkar and Mahabal, "An Enquiry into the Effects of the Working of Tenancy Legislation in Baroda District" in Desai ed (1969), P.428

However, though the land legislations did make the option of leasing out land a risky one, in themselves they did not, by any stretch of imagination, lead to the elimination of tenancy. Various methods were adopted to conceal tenancy rather than dispense with it. One option was to simply switch the tenant around (from plot to plot) and prevent any single tenant from gaining any legal recognition due to continuous occupation of a plot. A study of tenancy abolition in Gujarat concluded the following: "As the data would reveal, the implementation of tenancy abolition as to date gave ownership of land to some tenants but caused, in the process, a new phenomenon of concealed tenancies or occupancies which would change hands every year."<sup>12</sup> The argument is stated even more explicitly in B.K. Chowdhury's study of land reforms in West Bengal: "..... it is an admitted fact that there have been more evictions since 1953 than those in preceding years. Such a large eviction appeared to be more a result of panic than (an) honest attempt of landowners to cultivate their land under personal care. As soon as the panic subsided, the evicted land was restored to the original bargadar. However, as precaution against the vesting of ownership rights of the shared land to the bargadar which may be

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 12. Desai and Mehta(1962), cited in Joshi(1974), Part II, P.331-332.

claimed as a result of the continuous cultivation of the same land for a number of years, the landowners generally interchange the shared land among the different bargadars and settlement is made on a year to year basis. Even when the same land is allowed to be cultivated by the bargadar year after year the settlement is made on a year to year basis so as to give it the impression of a new settlement."<sup>13</sup> A report on the implementation of land reforms in Bihar concluded that 'the tenancy provisions were completely ineffective in practice' and that 'the tenants were frequently changed to prevent them from acquiring rights in land!<sup>14</sup> Thus, land legislations definitely provided an important motive for tenant eviction but this motive was not always in itself sufficient to ensure that eviction did take place. There did remain scope, inspite of these legislations, for the big owner to continue to lease out his land and live off the rent. The ambiguity comes through clearly in A.M. Khusro's study of the effects of land reforms in Hyderabad in which, after pointing to the eviction of tenants, he argues: "There are good reasons for believing that the animosity of the landlord is directed not so much against the tenant as against his protected status and it is most likely that once this

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13. Chowdhury (1962), cited in Joshi (1974), Part II, P.331-332.

14. Planning Commission (1966), cited in Joshi(1974), Part II, P. 332.



protected status was destroyed; a large part of the recovered lands were leased out once again to unprotected (ordinary) tenants. All the same, many a landlord, once bitten, twice shy, thought it was wise not to lease out again and kept the land under his own management."<sup>15</sup> In another work,<sup>16</sup> Khusro cites some quantitative data in support of this general argument which we present below. The data pertains to 350 cultivators in ten districts of Malwa, Madhya Pradesh.

~~TABLE II:2 SHARE-TENANCY IN MALWA DISTRICT, MADHYA PRADESH~~ -----

	<u>Zamindari</u>		<u>Jagirdari</u>		<u>Raiyatwari</u>	
	1950-51	1959-60	1950-51	1959-60	1950-51	1959-1960
1. Percentage of Cultivators who gave land on <u>Batai</u> .	6.66	8.00	8.51	12.00	8.00	14.66
2. Percentage of Cultivators who Cultivated Land on <u>Batai</u> .	20.00	26.00	16.00	24.00	12.00	20.00
3. Land Given on <u>Batai</u> as a Percentage of Owned Land.	1.84	2.22	14.11	3.82	4.91	7.88
4. Land Taken on <u>Batai</u> as a Percentage of Cultivated Land.	4.59	7.14	8.98	13.22	5.88	13.06

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The attempt on the part of landowners to conceal the fact that they give out land on tenancy comes through

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15. Khusro (1958), cited in Joshi (1974), Part II, P.330.

16. Khusro (1973), P. 24.

from a comparison of rows 3 and 4 where, in general, the proportion of total land given on share-tenancy seems to be much less than that leased-in on share-tenancy. Row 1 is likely to have downwardly biased figures for the same reason as row 3. If, as Khusro himself suggests, we concentrate only on rows 2 and 4, it also becomes clear that the proportion of land under share-tenancy (albeit concealed) actually increased during the nineteen-fifties. Khusro also infers the existence of concealed tenancy by looking at a discrepancy between the tenancy figures as revealed by the Population Census of 1961 and the National Sample Survey's Census of Landholdings of 1960-61.<sup>17</sup> The Population Census had approached the matter on a person-to-person basis and anyone with even the slightest claim to land as a tenant had declared himself to be one. The area under "pure" tenancy (in which the entire operated area was leased in) turned out to be 4.23 percent of the total cultivated area and, under 'mixed' tenancy (in which only part of the operated area was leased in), there was another 18.9 percent. However, the area under 'open' tenancy, which was captured by the N.S.S. figures, came to only 12.5 percent. Thus, more than 10 percent of the area was under 'concealed' tenancy, which the N.S.S. figures had failed to capture.

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17. Ibid, P.26

Land legislation was, in itself, by no means sufficient to wipe out this institution.

### The 'Green Revolution' and Petty Tenancy

The tenancy arrangements in various parts of the country were, however, to be put to a severe test by another set of interrelated changes that took place after independence. The huge expenditures under the plans had the effect of giving a fillip to prices, thereby making agriculture more profitable. A new technological 'package' was introduced, beginning with the selection of fifteen districts under the Intensive Agricultural District Programme in 1961. The new package involved the use of high-yielding varieties of seeds which, under test conditions, had shown spectacular increases in yields. The nature of the new package has been described by Wolf Ladejinsky as involving "high yielding varieties, improved farm equipment, substantial inputs of chemical fertilisers and insecticides, which in turn require the indispensable assured supplies of water at specified intervals."<sup>18</sup> The requirements of fixed and working capital went up hugely. It was found in one study, which surveyed some traditional farms as well as others using the new 'package', that the fixed capital requirements on the traditional farms were, on the average, only Rs. 407 per hectare, but were Rs.1,177

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18. Ladejinsky (1973).

per hectare on 'modern' farms.<sup>19</sup> The overall impact of the new package is the subject of some controversy;<sup>20</sup> however, for our purposes it is sufficient to note that at least when introduced in irrigated areas, it did, at least for a few selected crops, substantially raise output. Investment in agriculture, which had been so lacking in the colonial period, now began to take place on a large scale in Punjab, Haryana, Western Uttar Pradesh, Coastal Andhra Pradesh and, to varying extents, in many other parts of the country.

The changes were first identified by perceptive observers like Daniel Thorner who, in a series of articles in 1967, put forward essentially the following proposition: "Now, for the first time, there has come into being in India, a layer, thick in some regions, thinner in others, of agricultural capitalists."<sup>21</sup> Thorner's findings were in fact challenged immediately and, in the next fifteen years, there was much discussion about the extent of capitalist development in Indian agriculture.<sup>22</sup> It is beyond the scope of this thesis to attempt to

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19. North London Haslemere Group (n.d), cited in Rudra (1982), P.225

20. The literature on the extent of technological change in Indian agriculture, and its impact is huge. Byres (1972) has a comprehensive review of the earlier literature. Byres (1981) has several references to later work.

21. Thorner (1967).

22. See Thorner (1982) for a review of this discussion.

extract from this discussion any general proposition regarding this question; however, it would probably be generally agreed that a qualitative break from the past has occurred, at least in the extent to which modern inputs like high-yielding varieties and chemical fertilisers are being used. We present some summary statistics below which clearly reveal the trend we have been describing.<sup>23</sup>

TABLE II:3 INCREASE IN THE USE OF AGRICULTURAL INPUTS.

Item	1950-51	1965-66	1975-76	1978-79
1. Net Irrigated Area as a Percentage of Net Sown Area.	17.6	19.3	24.2	N.A
2. Consumption of Fertilisers per Hectare of Cropped Area (kilograms)	0.5	5.1	17.4	N.A
3. Tractors Per Lakh Hectares of Gross Cropped Area.	7	34	166	234
4. Oil Engines Per Lakh Hectares of Gross Cropped Area	62	295	1,074(1974)	N.A
5. Irrigation Pump-sets With Electrically Operated Tube-Wells Per Lakh Hectares.	16	326	1,617	2,308
6. Consumption of Power in Kilowatt-hours Per Thousand Acres of Gross Cropped Area.	1.5	12.2	50.0	76.9

SOURCE: Basic Statistics Relating to the Indian Economy, Volume I, All India (October, 1979), Sec. 10; Centre For Monitoring the Indian Economy.

23. Cited in Omvedt (1983)

We may now focus narrowly on our problem: was petty tenancy able to survive the phase of investment in new technology? Or did it give way to another mode of labour use, i.e., that of cultivation with hired labour? Did big landowners in 'green revolution' areas continue to lease out land to petty tenants or did they choose to evict them and cultivate with hired labour? The rest of this chapter is devoted essentially to an examination of this question. To anticipate our argument, we will be taking the view that the evidence is, at the least, highly suggestive of the fact that, in the face of investment in a new technology, the relative attraction (for big landowners) of direct cultivation with hired labour (vis à vis the option of leasing out the land to small tenants) has increased. Petty tenancy may have survived for a variety of reasons (some of which we will discuss) but the tendency to opt for it has definitely diminished after the introduction of the new technology.

We will begin by looking at data from nation-wide surveys conducted by governmental organisations. We will argue that while the data unambiguously point towards the decline of tenancy (especially petty tenancy), aggregate level data do not reveal much about the reasons for this decline. We will then look at some aggregate figures for especially advanced districts. These figures

will tend to confirm our suspicion that, once big landowners decide to take advantage of productivity raising innovations, they are much less inclined than before to lease out their land. However, when it comes to investigation of the reasons for the decline in petty tenancy, we have found that the best evidence is from micro-studies conducted by individual researchers. Some of these researchers have been specifically interested in the reasons for the decline of petty tenancy (Bhalla 1977b, for example); others have commented on this question in passing, in the course of general discussions on the "Green Revolution" (Ladejinsky 1969, for example). Time and again, these researchers have concluded that the introduction of new technology has led to the decline in petty tenancy. Other factors contributing to this phenomenon (land legislations, for example) have been recognised, but the role of the new technology in contributing to the decline of petty tenancy has been unambiguously affirmed. The point is made by a large number of authors and it is our view that the existence of such a large number of studies from different parts of the country is strong confirmation of the point we are making. This chapter, therefore, includes a detailed discussion of these different studies including extensive quotation from each of them. This exercise is necessary, since the stylised fact sought to be established is

crucial to the argument<sup>4</sup> of this thesis; readers who are convinced that the data do support this stylised fact and are tired of illustrations, can skip some of the discussion. We will end this chapter by considering the evidence which points to the survival of petty tenancy, despite the introduction of new technology. There is in fact substantial evidence of this phenomenon also. We will argue, however, that while this does indicate that petty tenancy is not necessarily incompatible with innovation by landowners, it does not take away from the fact that a definite shift in preference regarding the mode of labour-use has taken place, due to the introduction of new technology. It is our contention that the evidence in this chapter and the previous one, taken together, does indicate that there is a contrast between areas where techniques have remained more or less static (even when agriculture has become more commercialised) and regions where innovations have been introduced by landowners. It is true that in both kinds of areas all kinds of arrangements do exist, ranging from casual labour to a 'pure' form of tenancy, in which all the capital and management is provided by the tenant; we are, however, simply pointing to the direction in which technological change influences the choice of the mode of labour-use.



It is no doubt possible to find numerous instances where petty tenancy has survived technological change; there are many instances when even with static techniques direct cultivation is the preferred option; one may find cases where increased production of a crop for sale alone (without any investment in agricultural improvement) motivates a shift to direct cultivation-it is not our intention to deny any of this. We are merely seeking to establish that, with technological change, a systematic tendency seems to begin to operate in favour of direct cultivation with hired labour; all landowners may not choose this option, but the tendency to choose it is much stronger than earlier.

The mere fact of a decline in tenancy in independent India is hardly open to question. The figures below are illustrative.

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 TABLE II:4 TENANCY VARIATION OVER TIME.  
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	Percentage of Holdings Reporting Land Leased-in, All India.	Percentage of Operated Area Leased-in, All India.
1950 - 51	N.A	35.7
1953 - 54	39.85	20.34
1961 - 62	23.52	10.70
1971 -72	17.61	9.25

SOURCE: All India Debt and Investment Survey, Statistical Tables Relating to Disposition of Land Held and Area and Value of Irrigated Land Owned by Rural Households as on June 30, 1971 (Bombay, RBI, 1978) 24.

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 24. Cited in Joshi (1974), Part II.

The decline in petty tenancy comes through from the following figures (All-India).<sup>25</sup>

TABLE II:5 Percentages of Pure Tenants and Entirely Owned Holdings, 1953-61

Item	1953-54	1960-61
1. Percentage of Pure Tenants.	17	4.2
2. Percentage of Entirely Owned Holdings.	60	71.6

Since pure tenants, it is well known, were usually petty tenants (i.e., tenants with small bits of land), the above figures do probably reflect the impact of land reforms in the nineteen-fifties, which led to the eviction of small tenants. This is also reflected in the following statistics<sup>26</sup> (All India Figures).

TABLE II:6 Decline in Number of Petty Cultivators, 1954-62

Item	1954-55	1961-62
1. Number of Households not Cultivating Land.	6.6 million	18.6 million
2. Number of Households with Less than 2.5 Acres (Operated Area).	27.6 million	21 million

Disaggregated figures for a later period reveal this trend even more unambiguously. We will see below that,

25. Dasgupta (1976), P.13; cited in Bhalla (1977a).

26. Bardhan (1977).

between 1960-61 and 1970-71, in virtually every state the proportion of holdings reporting some land leased-in which were cultivated by landless tenants declined.

TABLE II:7 Decline in Leasing to the Landless, 1960-71

States.	Percentage of Holdings Reporting Some Land Leased-in Cultivated by Landless Tenants	
	1960-61	1970-71
1. Andhra Pradesh	16.42	3.28
2. Assam	37.96	13.67
3. Bihar	12.11	1.84
4. Gujarat	21.51	7.41
5. Haryana	-	9.69
6. Punjab	27.00	9.02
7. Jammu and Kashmir	33.97	3.09
8. Kerala	52.98	46.38
9. Madhya Pradesh	13.09	1.75
10. Madras	15.61	13.58
11. Maharashtra	13.68	6.44
12. Mysore	25.18	20.75
13. Orissa	13.16	14.11
14. Rajasthan	42.73	6.94
15. Uttar Pradesh	12.49	4.89
16. West Bengal	24.38	9.49
17. Himachal Pradesh	N.A	6.68
18. All India	21.58	15.03

SOURCE: Landholdings Surveys of the National Sample Survey, the relevant years.<sup>27</sup>

27. Bardhan (1976), Part II.

It is evident that the landless were able to get land on lease to a much lesser extent in 1971 than in 1961.

As we have earlier mentioned, the figures we have cited, while indicating that landless labourers or owners of very small plots are getting land on lease much less often than before, do not reveal anything about the reasons for this decline. A preliminary indication that a part of this decline may be due to the factor we are highlighting (investment in new technology) can be obtained from the aggregate figures for tenancy in a few advanced districts. In a study of labour-use in Indian agriculture, Vaidyanathan has provided some figures for three very advanced districts- Muzaffarnagar in U.P., Ferozepur in Punjab and Coimbatore in Tamil Nadu. In each of these districts capital-intensive methods of farming had been adopted. Large portions of the operated area were irrigated in each case and high-yielding varieties were grown on a large scale. In the period 1954-57 to 1967-70 the average size of operational holding increased by 30-40%. Vaidyanathan comments: "The Ferozepur and Coimbatore data suggest that this process has occurred through a sharp decline in the area cultivated under tenancy arrangements. The ratio

of leased-in area to operated area in the former district has fallen from nearly 38 percent in 1954-57 to 11 percent in 1968-70, almost the entire reduction being under the category of share-tenancy. In Coimbatore, the percentage of land area leased out has fallen from 20.5 percent to 3.8 percent."<sup>28</sup> There was also a striking increase in the proportion of hired labour in total labour used in crop production, which is consistent with the possibility of large-scale petty tenant eviction. The relevant figures are given below:-

TABLE II:8. Proportion of Hired Labour in Total Labour-Use.

District	1954-57	1967-70
1. Coimbatore	26.2%	84.9%
2. Muzaffarnagar	27.5%	40.2%
3. Ferozepur	29.2%	48.8%

Another study reports that while in Ferozepur, in 1956-57, 25 percent of primarily tenanted farms (farms having half or more of their operated area leased-in) had less than 10 acres of operated area, in 1969-70 there was not even one <sup>such</sup> farm with less than 10 acres.<sup>29</sup> Petty tenancy had been virtually wiped out; anyone who was leasing in half or more of his land was cultivating

28. Vaidyanathan, "Labour Use in Indian Agriculture: An Analysis Based on Farm Management Survey Data" in Bardhan et.al. (1978); cited in Jose (1984).

29. Bardhan (1976), Part II.

more than 10 acres. Another study, conducted in Kota district of Rajasthan,<sup>30</sup> showed that between 1968-69 and 1971-72 the proportion of leased-in area in total operated area declined from 7.2 percent to 2.5 percent. The concentration ratio for operated area increased from 0.46 to 0.49 (though it was still less than that for owned area).

There is also clear evidence of a decline in petty tenancy in Punjab and Haryana, which are perhaps the two most agriculturally advanced states. We have already cited some figures for the proportion of leased area with landless tenants. The decline in petty tenancy is also pointed towards by the fact that while 39 percent of all holdings reporting any leased-in area in Punjab in 1953-54 had less than five acres, the corresponding percentage in 1970-71 was only 25.5 percent.<sup>31</sup> It is true, of course, that a large part of this decline may have been due to land reforms, but the persistence of this trend in later years (by which time the initial spurt of evictions due to the fear of land legislation would be over) is some indication of the impact of the new technology. In 1960-61, 12 percent of all holdings reporting some leased-in area had a total operated area of less than 2.5 acres; by 1970-71 this proportion

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30. Bapna(1973), cited in Rao (1975)

31. Bardhan (1976), Part II

had declined to 6 percent.<sup>32</sup> Pranab Bardhan has in fact pointed out that the Lorenz curve for distribution of operated area in Punjab and Haryana in the year 1970-71 lies entirely above the Lorenz curve for the year 1960-61, indicating that operated area was more unequally distributed than earlier. This too is consistent with the hypothesis that landowners are now more reluctant to give out land on lease.<sup>33</sup> Studies conducted in the mid-nineteen-seventies show that the trend towards self-cultivation has gone even further. The NSS estimate for the percentage of operated area under tenancy in 1971 was 28.01<sup>34</sup>; according to the Land Revenue Administration Reports, by 1975 the figure had come down to 19.3 percent.<sup>35</sup> G.S. Bhalla's estimate<sup>36</sup>

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32. Ibid,

33. Ibid. Bardhan also points to the phenomenon of 'reverse tenancy' (involving large owners leasing in from small owners) which has become firmly widespread in the agriculturally advanced regions. To the extent that 'reverse tenancy' has grown, the decline in the total area under petty tenancy would be underestimated, if we were to look at aggregate figures for the decline in tenancy as such. Vyas (1970), Nadkarni (1976), Bandopadhyay (1975) and Rao (1974) provide some evidence of 'reverse tenancy'.

34. Pant (1980), P.31

35. Talib (1979), cited in Gill (1983).

36. Bhalla (1979), cited in Gill (1983).

for the mid-seventies is even lower, at 9.13 percent. A study by S.S. Gill<sup>37</sup> in six villages in two districts in Punjab in 1976-77 found that less than 16 percent of the total land was under tenancy. The percentage of pure tenants among the total number of cultivators was also found to be very low; estimates vary between 4.5 and 11.9 percent. The corresponding figures in Punjab and Pepsu respectively, in 1953-54, were 34.5 percent and 32.5 percent.<sup>38</sup>

Even the above figures are, of course, as we had warned earlier, patchy and inconclusive regarding the motives for eviction (of petty tenants). Let us now consider some micro-studies which throw some light on this question. We first look at some studies on Punjab. A study of Ludhiana district<sup>39</sup>, published in 1971, asserted: "There is no doubt that the position of the tenant has become more difficult as a result of the green revolution. With profits from direct cultivation rising, there are more farmers who wish to lease-in than lease out." The author explains how the tenancy arrangement breaks down: "The large farmers who still lease out land usually demand a premium in terms of higher rents.... Landowners may ask for 70 percent

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37. Gill, "Capitalism in Punjab Agriculture" in Johar and Khanna eds. (1983).

38. Ibid.

39. Frankel (1971), P.34



of the crop, arguing that, with new methods, the tenant still receives a larger absolute portion from 30 percent of a higher output than 50 percent of a lower one. But since most of the small-owner cum tenant cultivators cannot afford to invest in optimum production practices, they find the new rentals uneconomic and are forced to give up as cultivators." Wolf Ladejinsky had come to similar conclusions after a survey in Jullunder and Ludhiana in 1967.<sup>40</sup> By then, 60-90 percent of the operated area in these two districts was under high-yielding varieties. Regarding the condition of tenants he writes : "Official information speaks of only one-seventh the number of tenants Punjab had a decade and a half ago, when they cultivated one-fifth of the cultivated land. It says nothing about the displaced tenants now disguised as share-croppers or agricultural labourers, mostly the latter. Nor does it say that aside from not wanting to tangle with tenants even though land reform legislations are easily evaded, in the economic conditions created by the green revolution NO owner wishes to lease out land. On the contrary, they would rather lease-in land and work it on their own account." Both these comments indicate clearly that there is a motive other than fear of tenancy legislation which is leading to tenant-eviction; the motive of taking

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40. Ladejinsky (1967).

advantage of the "economic conditions created by the green revolution".

For Haryana, we are fortunate to have a study which was devoted to examining changes in the pattern of land-holding and tenure-structure in the period 1962-72.<sup>41</sup> Three of the seven main findings of the study confirm the stylised fact we are seeking to establish quite unambiguously. We list these below.

(a) " Widespread resumption of leased-out land for self-cultivation was mainly a response by landowners to the opportunities afforded by productivity raising technology, and only in a small part due to fear of tenancy legislation."

(b) "Apprehension about tenancy legislation instead led to a more rapid 'tenant- switching' of whatever leased-in areas had not been resumed. However, in wet areas, other region-specific methods were also used by landowners to ensure the security of their leased-out land."

(c) " Resumption converted a substantial number of mixed tenure households into pure owners. It also sharply reduced the number of 'pure' tenants in the two regions where the new technology was most widely adopted."

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41. Bhalla (1977b).

Bhalla arrived at her conclusions by comparing the data for five different regions in Haryana which differ in terms of the extent of adoption of the new technology. The five regions into which Bhalla divided Haryana would be ranked in terms of the extent of spread of the new technology (in descending order) as follows: Region II, Region III, Region V, Region I, Region IV.<sup>42</sup> Going by Bhalla's description, Region II was much more advanced than the rest. It will be seen below that the phenomena occurring in 'advanced' regions, to which we are drawing attention, are always seen extremely clearly for this region. The fact that the 'green revolution' led to eviction of small tenants is evident in the contrast between the figures for 'advanced' regions and the 'backward' regions below.<sup>43</sup>

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42. Region II includes Karnal and adjacent highly irrigated areas. High-yielding varieties of wheat and rice, supported by tube-well irrigation, dominate the area. Region III includes most of Hissar and parts of Rohtak. Region V is adjacent to Delhi. It includes large parts of Gurgaon and parts of Rohtak. Region I covers much of Ambala district. Region IV is the most backward part of Haryana, next to Rajasthan. It must be remembered, however, that many changes may have occurred since Bhalla wrote her article a decade ago and the descriptions given above may not be valid for today.

43. Bhalla (1977b), Table 8, third line.

TABLE II: 9 Reduction of Tenancy by Acreage Class, Haryana, 1962-72

Region	Pure Owners in 1972 Who Were Mixed Tenants in 1962 as a Percentage of Total Households in the Relevant Acreage Class in 1972.		
	0-5 Acres	5-10 Acres	10-15 Acres
1. Region I	6.5	7.1	-
2. Region II	19.6	17.3	14.1
3. Region III	13.7	12.0	-
4. Region IV	2.7	-	11.3
5. Region V	18.4	12.0	4.4
6. All Haryana	12.5	10.1	6.4

It may be noted that in regions II, III and V (the advanced regions) a large percentage of owners in the 0-5 acre group have lost land which they had leased in, in the period 1962-72. This percentage is extremely low in region IV, which was the most backward region, and also in Region I, the second-most backward region. The same trend is visible to a lesser (but still clearly noticeable) extent for the size-group 5-10 acres. Thus, the figures indicate that small owners may have lost leased-in land to a greater extent in the 'green revolution' areas than in the 'backward' ones. It is also striking to note that all the instances where a pure tenant was evicted and became an agricultural labourer occurred either in region II or in region III.<sup>44</sup>

44. Ibid, Table 14.

Conversion of Petty Tenants to  
 TABLE II: 10 Agricultural Labourers, Haryana, 1962-72.

Region	Number of Households Which Became Landless Agricultural Labour House- holds due to Resumption in the period 1962-72.
1. Region I	Nil
2. Region II	5,570
3. Region III	5,037
4. Region IV	Nil
5. Region V	Nil
Total	10,607

Bhalla also provides striking confirmation of our view (expressed earlier in this chapter) that fear of tenancy legislation alone may have led to 'tenant-switching' rather than direct cultivation. She provides figures for 'true' resumption as a percentage of 'gross' resumption; this tells us the percentage of times a tenanted acre was lost due to resumption for self-cultivation out of the total number of times a tenanted acre was lost by a lessee. The remainder would, of course, have been lost due to 'tenant-switching'. She also computes what she calls the 'velocity of tenant-switching' which is calculated as follows: the number of acres switched, each multiplied by the number of times it has been

switched, is summed and then divided by the total leased

-in area in 1972.<sup>45</sup>

TABLE II: <sup>Relative Importance of True Resumption And</sup> LOA Tenant Switching and Velocity of Tenant Switching, 1962-72

Description	Regions				
	I	II	III	IV	V
1. True Resumption as a Percentage of Gross Resumption.	58.0	58.1	39.6	10.4	14.8
2. Tenant Switching as a Percentage of Gross Resumption.	42.0	41.9	60.4	89.6	85.2
3. Velocity of Tenant-Switching	0.82	0.57	1.33	1.89	4.26

True resumption, as a percentage of gross resumption, is highest for region II (the most advanced region) and lowest for region IV (the most backward region). The other figures do not fall into any regular pattern; the figure for region III (the second-most advanced region) is quite high. The velocity of tenant-switching is clearly the lowest in region II. It is second highest in region IV. Again, the other figures do not follow any pattern, with the figure for Region V being surprisingly high, and that for Region III being on the low side, but higher than for Region I. The figures do

45. Ibid, Table 13.

not behave exactly as our hypothesis would predict; in an ideal case the figure for true resumption as a proportion of gross resumption would have continuously increased as we moved from the less to the more advanced regions. The velocity of tenant switching should have continuously declined as we moved from the less to the more advanced regions. The ideal case would, of course, have occurred only if reality obeyed the assumption of ceteris paribus; in our view, the fact that a clear contrast exists between the most backward and the most advanced region is in itself confirmation of our hypothesis that it is technological advance which leads to petty tenant eviction; in the absence of technological change, landowners may merely switch tenants around from plot to plot, in order to circumvent tenancy legislation, rather than dispense with the tenancy arrangement itself.

A number of illustrations similar to the sort we have cited for Punjab have been provided by other authors for various other parts of the country also. One such study was conducted by Ladejinsky himself in Purnea and Saharsa districts of Bihar, in 1969.<sup>46</sup> Purnea and Saharsa had been extremely backward districts, until the development of the Kosi irrigation scheme had provided an impetus to cultivation with high-yielding

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46. Ladejinsky (1969).

varieties, use of chemical fertilisers etc. Share-cropping was widespread; a sample study in Purnea in thirty-one selected villages had shown that 43 percent of the households were share-cropper households. They cultivated as much as 23 percent of the total operated area. Land reform legislations were easy to evade; Ladejinsky mentions a conversation with a landlord who, he says, "first informed us that he owned 16 acres of land but corrected himself under the good-humoured prodding of a crowd of farmers that he had failed to mention the remaining 484 acres"! This landowner was looking ahead and planning to modernise the farming on his land. Was he planning to retain the tenancy arrangement while incorporating these changes? Ladejinsky writes: "As he looks ahead, he finds the present arrangement with the share-croppers a hindrance. His main reason is the modernisation of the land, which he maintains his share-croppers cannot undertake. Speaking as one economic man, and, mistakenly, to another economic man he tried to explain to us... that the new agricultural policy calls for large resources and unencumbered management, measures he could only apply with hired labour." Ladejinsky also reports that other landlords in Purnea had similar views.<sup>47</sup> In an earlier visit to Patna district (also in Bihar) in 1967, Daniel Thorner

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47. Ibid.



had observed: "Batai tenancy.....was on the wane. Although there used to be a lot of it in Patna district, direct farming was now so profitable that practically no one gave out land on crop-share."<sup>48</sup>

Another study of Chingleput district (a very advanced district in Tamil Nadu) is equally explicit that the decision to cultivate with hired labour, instead of leasing out the land, was 'economically rational'. In field surveys conducted in 1981 and 1983, Mihir Shah<sup>49</sup> found that the big landowners of the region (land distribution was very skewed) had adopted an 'extremely rigorous profit-seeking calculus.' An overall shift had taken place, he writes, from "a rentier orientation to a more entrepreneurial one." Virtually all the area was irrigated and a large part of it was under high-yielding varieties. Chemical fertilisers were widely used. What did the 'rigorous profit-seeking calculus' dictate regarding the choice between tenancy and cultivation with hired labour? Shah tells us that there is "an overwhelming preference for undertaking cultivation with hired labour, generally under direct supervision." Shah does mention that the landowners cited the desire to evade tenancy

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48. Thorner (1967)

49. Shah (1984), P.282-83.

legislation as an important reason for the shift to direct cultivation, but this was certainly not the only reason. He writes: "They (the landowners) also spoke of the possibility that the tenant may neglect cultivation through either lack of willingness or ability to invest productively. In general, they felt that the returns from direct cultivation under their own supervision were higher. Indeed it was only when they had serious problems of supervision or when land quality was very poor that they did lease out the land." Shah found that, at the other end of the social spectrum, the situation had been grasped in a similar way: "The labourers were very clear why tenancy had declined and why landowners generally opted for direct cultivation. They spoke of tenancy laws but also emphasized how high returns could be obtained through direct cultivation.... leasing out was resorted to only when the landowner had widely scattered plots of land or when he found it hard to directly supervise cultivation of his entire holding."<sup>50</sup>

Nripendranath Bandopadhyaya's study of the causes of the increase in the number of agricultural labourers in three districts of North Bengal (Jalpaiguri, Darjeeling and Malda) also found one cause to be the to phenomenon of tenant eviction in the face of new opportunities for profit-making through the introduction

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50. Ibid, P. 287-88.

of new technology. Again, it is clear that share-tenancy was consistent with the earlier rentier lifestyle, but incompatible with the new-found entrepreneurial interest in agriculture. Commenting on the evidence regarding 'gentleman farming', Bandopadhyay writes: " Like any other mofussil town gentry, Jalpaiguri babus too had some landed property cultivated by adhiars in their respective villages. This was more for domestic use than as an .economic venture..... the creation of new potentials in agriculture with the allurements of steadily rising prices of food crops drew the attention of the town gentry towards high-yielding food crop cultivation, more as a business proposition than as an element in a semi-feudal lifestyle." And what was the mode of labour-use chosen, now that farming was a business proposition ? Bandopadhyaya writes: "The new entrepreneurs evicted the traditional share-croppers either through mutual agreement or under duress. They often engaged part of the dispossessed labour force as agricultural labourers in their modernised farms."<sup>51</sup>

Lockwood and Moulik found evidence of tenant eviction for similar reasons in a village named Jounti, near

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51. Bandopadhyaya (1977)

Delhi, in a study conducted in the mid-sixties.<sup>52</sup> Jounti had been selected by IARI in 1964 for special encouragement and assistance, as part of its seed multiplication programme and, in 1965, it was chosen to specialise in improved seed production, as part of the Fourth Plan. The programmes soon had an impact. By 1968, in the authors' words, "..... the village appeared to have emerged from the conservative environment of the surrounding villages as a rapidly modernising farming community....." Here too, tenancy declined. In 1964-65, 20 percent of the land had been cultivated by tenants; the figure had been reduced to 6 percent by 1968-69. The authors are clear about the motives for eviction: " Attracted by the high profits in dwarf wheat seed after 1965, several non-farming landlords ejected their tenants and began farming (by) themselves. The following description, by Utsa Patnaik, of a shift from tenant cultivation to direct cultivation with hired labour has the same flavour as Lockwood and Moulik's observations. The description is based on an interview with a Thakur family in Kaira district in Gujarat in 1969. She writes: " The family which had formerly had zamindari rights over the entire 1000 acres of the village land now started operating capitalist farms on land 'resumed' from tenants...

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52. Lockwood and Moulik (1977), P. A-17.

the main source of profits were high value orchard crops, tobacco and improved varieties of staples.. in the course of a few years it has switched from rent to profits as its main source of income."<sup>53</sup>

An interesting element in the literature on the impact of the new technology on agrarian relations is that many of the instances cited of a shift from share-tenancy to cultivation with hired labour are from West Bengal. As we argued in our first chapter, share-tenancy was extremely widespread in Bengal in the colonial period. We had also argued that it was quite evident that the practice of leasing out land to landless labourers or very small owners was not just carelessness on the part of landowners; leasing out to petty tenants seems to have been the most profitable option. Evidence from West Bengal of eviction of small tenants and cultivation with hired labour in the face of new technology therefore clearly indicates that in some way the introduction of a new technology reduces the attraction of petty tenancy. There is, in fact, a fair amount of evidence of this sort. We have already cited the study by N. Bandopadhyaya for North Bengal. In a study entitled Land Reforms and Agrarian Change in India and Pakistan <sup>54</sup> P.C. Joshi cites several other such instances. For instance, referring to a study published by the Bengal Chamber of Commerce

53. Patnaik (1972)

54. Joshi (1974)

in 1971, he writes: "... a study of four villages in four districts of Bengal reports that the availability of water, by raising the productivity and profitability of agriculture on the basis of new technologies, induces landowners to take to self-cultivation by terminating share-cropping arrangements."<sup>55</sup> In another study by Dharm Nariain and P.C. Joshi<sup>56</sup> the authors quote from study which is arguing that share-tenancy actually increased in the village they surveyed in Kashipur, in West Bengal, in the period 1959-60.<sup>57</sup>

However, the study draws attention to a factor which is working in the opposite direction: " The introduction of major irrigation facilities, of which mention was made earlier, might, however, work as a pull in the opposite direction. In some of the neighbouring villages, land was being increasingly brought under owner-operation. There was growing demand for fertilisers, particularly bonemeal..... The price of crops, particularly that of paddy which showed a growing trend in this period provided a further incentive to farming."

An interesting piece of evidence comes from Ashok Rudra and Khoda Newaj<sup>58</sup>, following a survey conducted by Newaj in two villages in Birbhum district. An arrangement known as kisheni had been widely prevalent in the area; the landowner provided all the capital-----

55. Bengal Chamber of Commerce (1971)

56. Joshi and Narain (1969)

57. Agro-economic Research Centre, Visva Bharti, Santiniketan (1961)

58. Rudra and Newaj (1975)

including ploughs and bullocks and gave the tenant one-third of the total output. Rudra and Newaj report that the Kisheni system seems to be rapidly disappearing, giving place to cultivation with hired labour on an annual or daily basis. Of the total of 253 families in the two villages, 103 owned land. As many as 55 of these families reported that they used to cultivate with the help of kishens but that they had given up this practice. Some of the data provided by Rudra and Newaj is given below.

Table II : 11. Decline of Kisheni

Description	Number
1. Number of families which went from <u>kisheni</u> to <u>mahindari</u> <sup>59</sup> and casual labour cultivation.	24
2. Number of families which went from <u>kisheni</u> to casual labour cultivation alone.	31
3. Total number of families which have given up <u>kisheni</u> cultivation.	55
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59. The Mahindari system involves an annual contract between a labourer and an employer in which the labourer gets a fixed payment.	

The authors do not cite figures for the rest of Birbhum district, but are fairly confident that similar trends can be observed elsewhere. Unfortunately, the study does not provide any information regarding the motives behind the decision to dispense with the kisheni arrangement and cultivate with hired labour. However, evidence from another study which was conducted in Birbhum district itself in the late nineteen fifties leads us to believe that at least part of the phenomenon Rudra and Newaj have described can be attributed to the factor we are emphasising in this chapter (investment in new technology). The study is cited by P.C. Joshi, in the article to which we have just referred. He writes<sup>60</sup>:

" A study of village Shahjapur in Birbhum district of West Bengal reports that as a sequel to land reforms.... and to the introduction of canal irrigation (which has reduced weather risks and enhanced the prospect of gains in agriculture), landowners who used to have their lands cultivated through the krisheni system.... are now trying to change over to mahindari jote and, for this purpose, are trying to put pressure on the krishens to become their mahindars." Again and again, our illustrations are leading to the same conclusion: When investment in a new technology takes place, it becomes optimal to cultivate directly with the help of hired labourers

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60. Joshi is quoting Bhattacharjee (1958)



instead of retaining the petty tenancy arrangement.

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Another study conducted by A. Beteille in Tanjore district of Tamil Nadu<sup>61</sup> provides evidence of slightly different sort from that cited above. From Beteille's study the impact of new technology on tenancy comes through especially clearly because a contrast is established between two adjacent areas—one where changes have taken place in the recent past and one where they have not. In his illustration we not only have evidence of tenant eviction due to introduction of new technology, we also have evidence regarding the counter-factual case, in which techniques remained unchanged. In fairness to Professor Beteille and the reader it must, however, be mentioned that he gives only a hint of the contrast described above, in a stray reference. However, since there are few studies that explicitly examine the kind of question we are investigating, we cannot afford to ignore such stray references. There is, of course, the proviso that one must not read into them elements that are entirely absent; it is our view that in this illustration this proviso has been satisfied. We proceed now to present the evidence.

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61. Tanjore was one of the districts chosen early on (in 1961) for introduction of the new technology, as part of the Intensive Agricultural District Program. Tanjore is better known today as Thanjavur; we have, for convenience, followed Beteille's spelling. See Beteille(1974).

Tenancy had, over the years, been very widespread in Tanjore. A study conducted in 1963 found that as much as 33.6 percent of all cultivating households were 'pure' tenants and 50 percent or more of cultivators had leased in at least part of their land.<sup>62</sup> Within Tanjore, Beteille distinguishes between the 'Old Delta' and 'New Delta' regions. The 'Old Delta' has been irrigated for centuries whereas the 'New Delta' has been irrigated only for the last five decades or so. Within the 'Old Delta' too, Beteille distinguishes between the Eastern and Western Talukas. The Eastern Talukas have traditionally had much inferior irrigation and drainage arrangements than the Western Talukas. The Western Talukas have traditionally practiced extremely intensive cultivation and there was little change in the cropping pattern when the 'Package Programme' was introduced. In the Eastern Talukas, on the other hand, the 'Package Programme' brought about, in less than a decade, what Beteille calls a 'sea change'. Double-cropping was introduced for the first time only in this period. What was the fate of tenancy in the two regions? Beteille writes:<sup>63</sup> " In the past, it was probably equally common in all parts of the Old Delta but in recent years it seems to

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62. Ladejinsky (1965), P. 9

63. Beteille ( 1974) , P.152.

have been replaced to some extent by wage-labour in the Eastern Talukas. From what I could gather in the course of a brief stay in 1968, very little change seems to have occurred in the extent of tenancy in the Western Talukas. This would appear to be consistent with the limited change in productive arrangements in general in this area as compared with other parts of Tanjore district." Beteille does not elaborate the point, but it does appear from his comment, and the information given earlier, that in the Western Talukas, where techniques have remained unchanged, tenancy has persisted to the same extent as earlier, whereas in the Eastern Talukas, where techniques have recently changed, tenancy has declined. Later, in the same study, Beteille partially confirms this impression when he writes:<sup>64</sup> "As observed earlier, the largest farms in Tanjore are to be found in the Eastern Talukas of the Old Delta... Agriculture is viewed as a field for the investment of capital and the application of the most modern techniques available .... It hardly needs to be said that on farms of this kind production is organised through wage-labour. In some cases tenants have been converted into wage labourers, but how often this has happened is hard to determine".

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64. Ibid, P. 154.

Before drawing together the different threads of argument in this chapter, it is worthwhile to briefly discuss a possible criticism of the argument presented. It may be pointed out that while a large number of instances have been cited where petty tenancy has proved to be incompatible with technological change, there are also a large number of instances where this has not been the case. It may be argued that tenancy arrangements have not in fact proved to be necessarily incompatible with technological change—that there are many cases where the form of contract has been merely modified, rather than abandoned, in order to accommodate technological change. There is in fact a growing body of evidence to support this view. Ashok Rudra (among others) has presented evidence of this phenomenon. He has argued that tenancy cannot be viewed as necessarily implying feudal exploitation because landowners are not only sharing the costs of inputs with their tenants, they are even advancing capital in order to enable the tenants to bear their share of the input costs. Further, they are increasingly taking interest in production decisions. Some of Rudra's data, which were collected after detailed field investigations in West Bengal, Bihar, Orissa, U.P. and Punjab in 1975, are presented below:

Table II: 12. Proportion of Tenancy Contracts  
With Cost Sharing.<sup>65</sup>

State	Percentage of Systems.
1. West Bengal	67
2. Bihar	58
3. Orissa	48
4. Uttar Pradesh	67

In order to understand the above figures it is of course necessary to know what Rudra means by "Percentage of Systems." Tenancy contracts differ in the manner in which output and the costs of different inputs are shared. Each distinct arrangement Rudra calls a 'tenancy system'. If a system occurred several times in a village, it was counted only once. If it occurred again, in another village, it was counted a second time. Thus, the total number of 'tenancy systems' was computed; the percentage of this total number which involved cost sharing is the figure Rudra has calculated.<sup>66</sup> The next table shows that

65. Rudra (1982), P. 88

66. This peculiar procedure leaves room for the following kind of error. Suppose there are only two villages. Each has 99 identical arrangements in which input costs are not shared and one other, in which input costs are shared. Following Rudra's procedure, we would conclude that in two out of four 'tenancy systems' input costs were shared. This would, of course, give a very misleading impression regarding the incidence of cost-sharing. The probability of this kind of error would, however, be high only if within villages, in general, tenancy contracts which

production loans frequently go together with cost-sharing.<sup>67</sup> The figures are to be interpreted in the following way. Consider the first column. It reveals that in West Bengal 84.4 percent of the tenancy systems which involved landowners giving production loans to tenants also involved cost-sharing; only 53.3 percent of the tenancy systems which did not involve landowners giving production loans to tenants involved cost-sharing.

Table II : 13. Association between Cost-Shares and Owners giving Production Loans to Tenants.

Item	Percentage of Systems For Which Cost-Shares Exist			
	<u>West Bengal</u>	<u>Bihar</u>	<u>Orissa</u>	<u>U.P.</u>
1. Owners Giving Production Loans to Tenants.	84.4	81.8	55.9	61.0
2. Owners Not Giving Production Loans to Tenants.	53.3	48.9	37.5	69.4

66(contd.) do not include cost-sharing tend to be identical in all respects, whereas those which include cost-sharing vary a great deal. Since, a priori, there is no reason to expect this to happen, Rudra's figures may not be very suspect.

67. Rudra (1982), P. 129.

The measures of association between cost-shares and the incidence of owners giving production loans to tenants (derived from the above figures) are given below.<sup>68</sup>

Table II : 14. Measures of Association between Cost Shares and Owners giving Production Loans to Tenants.

State	Value of Contingency Chi-Square	Degrees of Freedom
1. West Bengal	36.30*	1
2. Bihar	17.52*	1
3. Orissa	1.91	1
4. Uttar Pradesh	1.21	1

\* Significant at one percent level.

Evidence of landlords' participation in decision-making in production is presented below.<sup>69</sup>

Table II : 15. Particulars of Tenancy Contracts.

Contracts	Percentage of Respondents			
	West Bengal	Bihar	Orissa	U.P.
1. Involving Crop Decision by Owner Singly or Jointly With Tenants.	56	29	30	96
2. Involving Input Decision by Owner or Jointly With Tenant.	54	30	46	90

68. *Ibid*, P. 130

69. *Ibid*, P. 131

Table II : 15.(Contd.)

Contracts	Percentage of Respondents			
	West Bengal	Bihar	Orissa	U.P.
3. Supervision of Harvesting by Employer or Representative.	91	89	87	95

Several other studies also provide evidence of this kind of modified tenancy arrangement. In a well-known and oft-quoted study of a deltaic village in West Godavari district of Andhra Pradesh, G.Parthasarthy and D.S. Prasad make the following observation, which tallies very closely with Rudra's evidence:<sup>70</sup> "When traditional varieties are grown, a share of two-thirds of the produce is rarely given. But if the tenant chooses to grow HYV the landlord should be given two-thirds of the share, and in majority of cases he does (sic).... Decision-making also shifts to the landlord more and more. He decides the variety to be grown, supplies a major part of the capital for non-traditional inputs, and provides finances to the tenant." Several other similar instances are also cited in Rao (1975) and Parthasarathy (1978). The point is, however, that the above evidence is not really incompatible with ours. From data of the sort provided

70. Quoted in Byres (1981)



by Rudra, Parthasarathy etc. it is definitely possible to argue that tenancy is not necessarily incompatible with technological change; that it can adjust to accommodate it. This does not, however, take away from the fact that its relative attractiveness (compared to direct cultivation with hired labour) has declined after the availability of new technological options. Tenancy can adjust to accommodate the new technology; yet, even though this possibility does exist, landowners are frequently choosing to evict small tenants and are cultivating with hired labour. Both the propositions 'Tenancy is not necessarily incompatible with the new technology' and 'When new technology becomes available tenancy is chosen less often than before' can be and, in fact, are true. Rudra himself has written: "The new technology, by enhancing the profitability of cultivation, has made a landowner, who earlier leased out his land or left it idle, a commercial profit-maximiser. There has been large-scale resumption of cultivation by such owners. In many cases this has led to eviction of tenants."<sup>71</sup>

Our view that the possibility of modification of the tenancy arrangement and its diminished attractiveness can go together is confirmed by the data Rudra cites in support of the observation we have just quoted. The same survey which had revealed evidence of tenancy

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71. Rudra (1982), P. 228.

modification also threw up evidence of tenant eviction and a shift to cultivation with hired labour.<sup>72</sup>

Table II : 16. Decrease of Tenant Farming and Increase of Farming With Hired Labour.

State	Percentage of Villages		
	Tenants being evicted	Tenants decreasing and Employment of Casual Labour Increasing	Employment of Farm Servants Increasing
1. West Bengal	59	71	43
2. Bihar	34	44	23
3. Orissa	37	48	70
4. Uttar Pradesh	69	37	49

Finally, it must also be noted that, occasionally, what looks like the survival of petty tenancy is in fact somewhat misleading. Landless labourers are sometimes given extremely small plots on lease just to ensure that they are present to work on the landowner's farm, when required. In the survey of some villages in Chingleput district which we have earlier discussed, Mihir Shah has reported coming across what he calls 'Pseudo-Varam' and 'Pseudo-Kuttagai',<sup>73</sup> arrangements. The villagers merely referred to them as Varam and

72. Ibid, P. 137

73. Varam is the local word for share-tenancy and Kuttagai is the fixed-rent arrangement.

Kuttagai but, on closer investigation, Shah found that they were what he (following Lenin) calls " allotment -holding labourers," meaning thereby that they were essentially labourers who had been given extremely small plots to ensure their availability during times of need. T.K. Sundari, in another survey in the same district, confirms this view; her data indicate that not only is the ' tenant' given a very small plot (0.3 acres, on the average), only a very small portion of the owned land is cultivated by tenants. We present below data collected for six villages in the year 1980.<sup>74</sup>

Table II : 17. Details of Pseudo-Tenancy Arrangements.

Village	Total Land Owned by Lessor (acres)	Land Leased Out by Lessor (acres)	Number of Lessees
1. Aminjikkarai	-	-	-
2. Manamai			
Case 1	60.5	9.33	18
Case 2	42.1	1.00	3
Case 3	14.37	0.66	2
3. Arungunram			
Case 1	30.8	2.00	8
Case 2	12.5	0.50	2
4. Voyalur			
Case 1	44.0	2.00	7
Case 2	31.0	1.50	5
5. Kilur			
Case 1	85.4	5.00	12

74. Sundari (1983?).

It is evident from the above that the shift to direct cultivation with hired labour has been made; the bulk of the land is cultivated on this basis. Only a small portion of the land owned is given to 'tenants' who, Sundari informs us, have to give first priority to work on the landowner's farm, at a wage-rate less than that of casual labour. Thus the 'survival' of petty tenancy in this advanced area is not as an alternative to cultivation with hired labour, but as a supplement to it.

We are now in a position to bring together the arguments of our first two chapters. Essentially, it has been our intention to draw attention to a contrast between the incidence of petty tenancy in two different phases of India's agricultural development. In the colonial phase, with little investment in agricultural production, and technology remaining unchanged, petty tenancy seems to have been a profitable option. Even in commercialised regions, where a considerable part of the production was for sale, this appears to have been the case. In independent India, land legislation has made tenancy a somewhat riskier option, but the scope for it has, by no means, been eliminated. Various loopholes have been exploited in order to safely retain the tenancy arrangement. However, the inclination of big landowners to lease out their land to small tenants has

markedly decreased because now, in contrast with the colonial period, capital is being invested in agricultural production itself, in a new and much more productive technology. In this altered situation, many landowners have evicted tenants and are cultivating with the help of hired labour. Petty tenancy has not been totally eliminated; in many cases it has survived (albeit in a modified form); it is, however, chosen much less often than before. In the next chapter we will attempt to advance some arguments to explain the contrast in the attitude (of big landowners) to petty tenancy in the colonial and 'green revolution' periods. We will first argue that, given the skewed distribution of productive assets in rural India and the availability in abundance of would-be agricultural labourers and petty tenants, there may be some definite advantages (for big landowners) in leasing out their land to small tenants. We will then investigate how, in a situation in which a new and improved technology is being introduced, it may become necessary to cultivate with hired labour because landowners and tenants may not be able to agree on the terms and conditions of their contracts.

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## CHAPTER THREE

SOME COMMENTS ON THE CHOICE OF THE  
MODE OF LABOUR - USE

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We have seen, in our first two chapters, that, in Indian agriculture, the option of leasing out land to a small tenant has often been more profitable than that of direct cultivation with hired labour. We have also seen that the petty tenancy option seems to become less attractive when major technological changes start taking place. In this chapter we attempt to advance some arguments to explain the attraction of petty tenancy in one context and the lessening of this attraction in another. We would like to stress that ours is a limited aim. We are merely focussing on some factors whose operation would, from our analysis, appear to push events in the direction(s) we have described above. It is not our contention that these factors are in themselves sufficient to fully explain the varying attitudes (of landowners) to petty tenancy. Rather, it is our view that our analysis may provide at least one part of a comprehensive historico-analytic explanation of these complex phenomena.

Hired Labour Versus Petty Tenancy: The Context

It is well-known that land is (and has been, in the colonial period) extremely unequally distributed in rural India. The eighth round of the N.S.S. Landholdings Survey (1954-55)<sup>1</sup> showed that 47 percent of the households in rural India owned less than an acre of land (or none at all), accounting between them for only one percent of the total land. The top 2.5 percent of households owned as much as 28 percent of the land. Though, with land reforms, changes have occurred (see Chapter Two), this inequality has persisted; the Lorenz ratio for owned land which was as high as 0.6764 in 1953-54 had declined only very marginally to 0.6750 in 1971-72.<sup>2</sup> As a result, a substantial proportion of the rural population has had to depend either on labour or on cultivation of leased-in land for its sustenance. With slow industrial growth, there has not been much possibility of non-agricultural employment. This, combined with the increasing population pressure, has meant that a very large section of the rural population is (and has been) competing for the relatively limited opportunities available for agricultural labour or for leasing in land. An impression of the extent of excess

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1. Cited in Sen (1962), P. 32.

2. See Laxminarayan and Tyagi (1982).

supply of labour can be obtained from the figures below which reveal the extent of unemployment among agricultural labour households.

Table III : 1. Days Employed Annually Per Worker  
(Agricultural Labour Households )

Year	Wage Employment			Total Employment
	Agricultural	Non- Agri- Cultural	Self Plus Salary Employment	
1. 1963-64	208	27	31	272
2. 1974-75	185	25	36	246

Source: All India Rural Labour Enquiry 1974-75, Summary Report, Chandigarh, 1978.<sup>3</sup>

In such a context, the bargaining position of agricultural labourers and petty tenants has been extremely weak and they have had to accept very harsh terms and conditions in the contracts which they have entered. Our argument in this chapter therefore assumes a dominant landlord who is interacting with a tenant/labourer who has a very limited ability to shape these terms and conditions (of contracts with landowners).

A further point of interest is the relative size of the income of the petty tenant and the agricultural labourer.

3. See Patnaik, 'Introduction' in Patnaik and Dingwaney ed. (1985), P. 16.



We have argued above that both would receive very low incomes; however, it is still interesting to see whether there is any income differential between them. One might suspect that the tenant, who supplies not only his labour but also capital, might receive a higher income than the agricultural labourer, who supplies only labour. There is, however, ample evidence to indicate that in rural India the petty tenant has earned no more than the agricultural labourer; if anything, he may have earned even less. As early as 1928, the Royal Commission on Agriculture had argued with reference to small land-holders that "in many cases the tiller of the land is subject to conditions that make his status approach more closely that of a labourer than an independent cultivator".<sup>4</sup> H.C. Calvert, while commenting on the profitability of share-cropping in Punjab wrote (in 1922): "A careful consideration of the available evidence makes it clear that the share system has been widely adopted by landlords as a way of getting higher rents on their better irrigated soils and lands; the customary share is usually double what a fair rent should be and leaves to the tenant less than a reasonable estimate of his cost of production. The result is that the return obtained by the share-tenant for his

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4. Quoted in Patel (1952) p.

labour is less than that of a daily labourer."<sup>5</sup> In a study of agricultural labour in Bengal, A. Ghosh also indicated that the landowner's payment was of the same order of magnitude in the two arrangements. The amount of profit earned from each was almost the same. The relevant figures are given below.

Table III : 2. Relative Profitability of Share Tenancy and Direct Cultivation.

Item	1936	1944
1. Value of Output per acre (in Rs.)	42.5	125.0
2. Value of Share of Landlord in case of Share-cropping on the Basis of Half the Produce (in Rs.)	21.2	62.5
3. Net Profit of Owner-Operator working with hired labour (in Rs.)	23.6	68.4

Source: Ghosh, A. "Agricultural Labour in Bengal", Indian Journal of Agricultural Economics, 1948.<sup>6</sup>

The situation in independent India has not been very different. The Ministry of Agriculture brought out, beginning in 1954-55, a series entitled Studies in the Economics of Farm Management. The areas surveyed

5. Calvert (1922)

6. Cited in Ghosh and Dutt (1977), P. 93

were Madras, Punjab, Uttar Pradesh, Bombay and West Bengal. It was found, among other things, that if family labour was valued at the market wage rate, " 50 percent or more of the farmers are carrying on business at a loss." <sup>7</sup> The Farm Management Studies of course referred to farmers in general and not to petty tenants in particular. An interesting piece of evidence on this question has been provided by Utsa Patnaik. She has pointed out that in India today paid-out costs of production are usually 45-50 percent of the gross value of output; with 50 percent of the output value often being paid out as rent, only 5 percent of the total output is the return to family labour.<sup>8</sup>

The Preference For Petty Tenancy: A Micro-Economic Argument.

Before we move on to our own argument, it is necessary to take note of one advantage of petty tenancy (over cultivation with hired labour) which follows directly from the discussion in the previous section.

If both the agricultural labourer and the petty tenant receive the same level of income, petty tenancy will be a preferable option because the landowner will

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7. Quoted in Sen (1984), P. 2.

8. Patnaik (1979), P. 400 .

receive the same income as he would while cultivating with hired labour without investing any working capital (which he would have had to invest had he cultivated with hired labour). Suppose total output on the landowner's plot is  $Y$  units and the working capital requirement is ' $a$ ' units. Suppose that a tenant to whom he might lease out the land has to be given ' $x$ ' units, which ~~is~~ <sup>is</sup> the same amount that ~~would~~ have to be given to the single hired labourer who would be required to till the land, if the owner decides to use hired labour. In both cases the landowner's income is  $Y-x$  units. The petty tenancy option is, however, preferable because, in this arrangement, it is the tenant and not the landowner who provides the ' $a$ ' units of working capital. The landowner can put these ' $a$ ' units to some other use, and a return ' $b$ ' can be earned. The total income of the landowner in the petty tenancy case will thus be  $Y-x+b$ , in contrast to merely  $Y-x$  in the case of cultivation with hired labour. The point has been developed at some length by Utsa Patnaik<sup>9</sup> in the course of an argument which seeks to establish that pre-capitalist rent can act as a barrier to capitalist investment. Our apologies to her for the crude summary of one portion of it attempted above.

It is our major aim in this section, however, to focus on one advantage of petty tenancy which would exist

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 9. Ibid. Also see Patnaik (1976) and Patnaik (1985)

even if there were no working capital at all. It is not our intention to deny the significance of Utsa Patnaik's argument- ours can be viewed as supplementing it. Our argument is presented in the form of a model. For simplicity, we will consider a situation in which a landowner is deciding what to do with a small plot of land which he owns. The plot requires, for one season, the entire effort of one person. The landowner has to decide whether to have it cultivated by a tenant or whether to hire a labourer and have him cultivate it. We list our assumptions below.

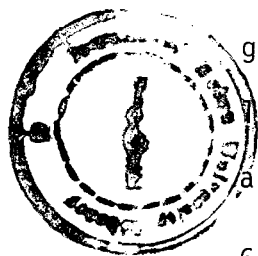
1. We assume, as mentioned above, that no working capital is required. Output is produced by simply labouring on the land.
2. Output is the same, whether the land is cultivated by a tenant or by a hired labourer.
3. The behaviour of output is well known to tenants, labourers and landowners; each possible value of output can be assigned a probability. The 'economic prospect' can be summarised as  $(Y_1, Y_2, Y_3, \dots, Y_n; P_1, P_2, \dots, P_n)$  where  $Y_i$  represents a possible value of output and  $P_i$  the probability associated with it. The sum of the probabilities is, of course, unity. To keep matters simple, we consider a very simple

prospect of the form  $(Y_1, Y_2; P_1, P_2)$ . Since output is variable, we assume that  $Y_1$  is greater than  $Y_2$ .

4. We have argued in our last section that the landowner has had a dominant bargaining position vis à vis the labourer and the petty tenant. Also, we have argued that the levels of income of the labourer and the petty tenant have not been very different. We assume in our model, therefore, that the landowner is at liberty to choose whatever kind of arrangement he likes, subject to providing the tenant/labourer some minimum level of utility ' $\bar{V}$ '. He will choose the arrangement which is most advantageous to himself, subject to his providing the tenant/labourer this minimum level of utility. We will not go into the question of the determination of this level  $\bar{V}$ . It can be considered the 'reservation utility', in the sense of being the utility that can be obtained by going in for the next best option outside employment in agriculture.

5. Landowners as well as tenants/labourers are risk-averse. They are prepared to accept a lower expected income if the variability of their income is reduced (and vice-versa). For example, the certain income which would yield the same level of utility as the prospect  $(70, 30; \frac{1}{2}, \frac{1}{2})$  would be less than 50;

a certain income of 50 would give higher level of utility because, in addition to having the same level of expected income, the risk-averse individual would now not have to face any variability. Also, the more risk-averse the individual, the more disutility he gets from variability. If  $(70, 30; \frac{1}{2}, \frac{1}{2})$  gives the a landowner (say) some utility  $\bar{Z}$ , if he becomes more risk-averse it will now give him less than  $\bar{Z}$ .



6. For simplicity, we will consider a situation of the following sort. The landowner is dealing with a single individual. He has to decide whether to offer him a tenancy contract or a hired (casual) labour contract<sup>10</sup>. Since, as we have argued in the previous section of this chapter, the petty tenant and the agricultural labourer are socio-economically similarly placed, this simplifying assumption can be safely made.

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 10. We are limiting our discussion to the choice between cultivation with casual labour and petty tenancy, ignoring the possibility of cultivation with permanent farm servants. It is our impression that the status of a permanent farm servant, who is at the beck and call of his employer day and night, is accepted only in times of great difficulty. In a survey of two villages in Raisen district, Madhya Pradesh, in March 1987 we found that people hated to admit they were harwahas (permanent farm servants); they usually accepted this status only because that was the only way to get a loan from the Patel (big landowner). Thus, the landowner may not always have the option of having a permanent labourer, in the way that he has the option of having a casual labourer or a petty tenant.

In either case, of course, a level of utility  $\bar{V}$  is to be provided.

7. With respect to income in the current agricultural season, an individual will be less risk-averse as a tenant than as an agricultural labourer. This is a key assumption in our model. The justification for it is quite simple. As a tenant a person is guaranteed employment for the entire season, whereas as an agricultural labourer he is not. The agricultural(casual) labourer faces the uncertainty of finding himself without employment if the landowner so decides; moreover, there is no guarantee that he will be able to find employment elsewhere, since there is an excess supply of labour and acute underemployment. The tenant, on the other hand, knows he will find employment at least for a season.

Consider now the choice for the landowner: should he give the individual he is dealing with a tenancy contract or should he hire him as a casual labourer? It can be seen easily(given our assumptions) that tenancy will be more advantageous. Suppose, with hired casual labour, the optimal arrangement for the landowner involves giving the labourer a payment which (if the landowner does not dispense with the labourer's services) should lead him to get some  $(y_1^*, y_2^*; P_1, P_2)$  for his work in the season as a whole. Can the landowner improve upon this by offering him a tenancy con-



tract ? He certainly can. If he goes in for a tenancy contract, the individual he is dealing with will be less risk-averse with respect to income in the current season. The same income configuration ( $y_1^*$ ,  $y_2^*$ ;  $P_1, P_2$ ) will give him a higher utility if he is given a tenancy contract, because he is now less risk-averse and the variability of his income will affect him less. With a tenancy contract, the landowner can therefore, take away some income (reduce  $y_1$  or  $y_2$  or both) in such a way that the individual whom he is dealing with continues to get a level of utility  $\bar{V}$  and his (the landowner's) own level of utility rises. Thus, a larger surplus can be extracted by going in for a tenancy arrangement instead of a hired-labour arrangement. By insuring tenant against the uncertainty he would face in the labour market (as an agricultural casual labourer) and thereby lowering his risk-aversion, the landowner is able to pay him less for his labour than he would have had to pay him as an agricultural labourer.

Before concluding this section, let us consider two possible objections to the above argument. Firstly it may be wondered how we are talking about variability of income in a hired labour arrangement; we would like to point out that hired (casual) labourers need not be paid a flat wage. It is well-known that for many jobs casual labourers are paid by share (harvesting,

for instance). There is, therefore, reason to believe that the landowner can give even a hired labourer a variable income (an income that varies as output changes) if he so desires. This brings us to the second possible objection. It may be pointed out that the above argument will not hold if, in the optimal arrangement for the landowner when he is employing a hired labourer,  $y_1^* = y_2^*$ . In such a case, (it may be argued) since there is no variability of income in the optimal hired labour arrangement, there would be no gain to the landlord by going in for a tenancy arrangement to ensure reduced risk-aversion (of the tenant/labourer). However, such a criticism will simply not hold. It can not be optimal for a risk-averse landowner to bear all the variability of output and not pass any of it on. The optimal way of paying a hired labourer must necessarily be one in which his income varies as total output varies. This is formally proved in the appendix to this thesis.

#### Technological Change and the Decline of Petty Tenancy.

We have argued at some length in our second chapter that the tendency to lease out land to small tenants declined sharply, after technological changes in agriculture began to take place in different parts of India in the early nineteen-sixties. Is this

phenomenon consistent with the model which we presented in the previous section ? In this section we argue that the decline of petty tenancy is in fact consistent with our argument thus far. It can be seen as partly being due to the violation of one of our initial assumptions. We elaborate below.

Suppose that in an area where petty tenancy is widespread, new technological options become available. Output per unit area is expected to rise sharply. How will the increased output be shared ? Given the dominant bargaining position of the landowner, he would like to appropriate the entire increase in output and not pass on any of the gains to the tenant. This requires that the share given to the tenant be reduced right upto the point where he would be left with the same level of income as earlier (in the sense of getting the old  $\bar{V}$  level of utility). Suppose, for instance, there had originally been a share-tenancy arrangement. The landowner has to now identify a new share  $\bar{r}$  which, he feels, will provide the tenant the old level of utility  $\bar{V}$  and no more. Not only this, the tenant too has to accept this new share  $\bar{r}$ . For this, he too must be confident that this reduced share will still yield him a configuration of incomes which will give him at least  $\bar{V}$  level of utility. For both of them to have this confidence, the behaviour of output, given the new technology, should be unambiguously

known. It should be possible to assign, as earlier, a probability to each possible value of output and a new probability distribution of outputs ( $\bar{Y}_1, \bar{Y}_2 \dots \bar{Y}_n$ ;  $\bar{P}_1, \bar{P}_2 \dots \bar{P}_n$ ) should be unambiguously identifiable. In such a circumstance the implications of the new share  $\bar{r}$  will be clearly known. The tenant will know that he is facing the income prospect ( $\bar{r} \bar{Y}_1, \bar{r} \bar{Y}_2 \dots \bar{r} \bar{Y}_n$ ;  $\bar{P}_1 \dots \bar{P}_n$ ) and can confirm that he is getting his old level of utility  $\bar{V}$ . The landlord too can be sure that he is not letting the tenant get away with more than  $\bar{V}$  level of utility. However, when a new technology is introduced, while it is known that output will rise, the exact extent of increase may not be known and, at any rate, the entire probability distribution of output (associated with the new technology) will not be known. All this will have to be estimated over a period of years after the new technology is introduced. Even the exact package of inputs to be used may not be known straightaway—there may be considerable experimentation before the optimal package is identified. The behaviour of final output will, of course, be changing as the package of inputs changes. The reaction of the newly introduced varieties to differing weather conditions will also have to be studied over years. In the intervening period, it will be very difficult for the tenant and the landowner to agree

on a contract. The landowner will be pressing for a higher and higher share of output for himself so as to appropriate all the increase in output; the tenant will resist this process to ensure that he is at least as well off as before, if not better-off. Whatever share  $\bar{r}$  is specified, the tenant will not be sure that he will get his  $\bar{V}$  and the landowner will not be sure that he is not getting away with more than that. In such a situation the tenancy arrangement may break down.

What is the alternative ? Clearly, it is an arrangement in which the landowner makes a flat payment which does not vary with the level of output. If the payment takes the form of some flat payment  $M$ , the tenant/labourer can compare it with his earlier income and assure himself that he is not worse off than before. The landlord too can convince himself that he is not surrendering any of the increase in output. One arrangement which does permit the payment of a flat sum is the hired labour arrangement. It may, therefore, be the logical choice in a situation when there is uncertainty regarding the behaviour of output. In spite of its other disadvantages, which we elaborated upon in the previous section, by virtue of permitting a flat, invariable payment hired labour

contracts may be the only ones landowners and the landless (or small owners) may be able to agree on. Thus, in a situation characterised by uncertainty regarding the behaviour of output due to the introduction of a new technology, petty tenancy contracts may be terminated in favour of cultivation with hired labour.<sup>11</sup>

As has been our practice in the earlier two chapters, we will conclude this chapter by summarising its contents. Essentially, we have advanced three propositions, one in each section of the chapter. In the first section we argued that in rural India, given the monopoly of land by a small section and the limited earning opportunities outside agriculture, landowners have had a very strong bargaining position vis à vis petty tenants and agricultural labourers. Moreover, the petty tenant who provides capital as well as labour seems to be paid a sum which is of the same order of magnitude as the payment to the agricultural labourer. In the second section we attempted to argue that in a socio-economic context like that of rural India, which is characterised by acute under-

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11. It follows from our argument that there may be a reversion to the petty tenancy arrangement, once the behaviour of output under the new technology becomes completely known. There is no evidence thus far on such reversion in Indian agriculture; it remains to be seen if a trend of this sort emerges in the future.

employment of labour, petty tenancy may in fact permit the landowner to extract a larger volume of surplus than cultivation with hired labour; the petty tenant has been insured against the uncertainty of finding employment which is faced by the agricultural labourer and can, therefore, be paid less for his labour (than a hired labourer). In the third section we argued that the petty tenancy arrangement may break down because, in the face of new technology, with uncertainty regarding the behaviour of output, it may be difficult for the tenant and the landowner to agree on a contract. The only viable contract may be one where the landowner makes a fixed payment; the hired-labour arrangement may be chosen because it permits this. Thus, some tentative arguments regarding the preference for petty tenancy, in a situation characterised by unchanging technology, and the diminishing of this preference, in a situation in which major technological changes are taking place, have been advanced.

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## CONCLUSION

After the detailed discussions of our first two chapters and the analytical arguments of the third, what conclusions can we now reach ? To start with, a brief recapitulation may be in order.

We have seen in our first two chapters the existence of a clear contrast in the experience with respect to agricultural growth in colonial and post-colonial India. In our first chapter we noted that, in the colonial period, capital rarely went into agricultural production even though it was available for money-lending, land purchase, for advances which led to acquisition of produce at preferential terms etc. Correspondingly, the techniques of cultivation also remained largely unchanged. We pointed out that, in this context, the option of leasing out land to small owners (or to the landless) seems to have frequently been a profitable one. Further, the mere fact that an increasing proportion of output was being produced for sale does not seem to have made petty tenancy a less attractive option; if anything, the converse of this seems to have been true. In our second chapter we first described how land reform legislations in independent India reduced, but did



not eliminate, the scope for petty tenancy. We went on to argue that the decline in petty tenancy can, to a significant extent, be traced back to a set of developments which represent a clear break from the experience of the colonial period: the growth of a tendency (at least in some regions) to invest capital in production itself and a transformation of the techniques of production in these regions. Our review of the evidence regarding the impact of investment in the new technology on petty tenancy indicated that even though this arrangement has on many occasions (after modification) been able to accommodate the new technology, there is no doubt that it is no longer as attractive an option as it once was; many large owners now prefer to cultivate with hired labour.

In our third chapter we examined the 'rationality' of the choice of petty tenancy. We argued that in a situation where, due to skewed distribution of land, limited earning opportunities outside agriculture and population pressure, a large number of landless labourers (or marginal landowners) compete for earning opportunities as agricultural labourers or tenants, petty tenancy may have some definite advantages. We pointed out that, in exchange for the security provided to the petty tenant, it may be possible to squeeze a larger surplus out of him than might be obtainable

if hired labour is used. For one thing, the tenant, who is providing some capital, may not get any return on it; he may earn per unit of labour put in only as much as an agricultural labourer, who does not provide any capital. The capital 'saved' by going in for a petty tenancy arrangement can be invested elsewhere, thereby making the overall level of income of the landowner higher than if would have been had he opted for cultivation with hired labour. Further, the petty tenant may even be underpaid for his labour. Since he has been insured against the uncertainty of finding employment (which he would have faced as a casual labourer), he may be paid less per unit of labour than a casual labourer.

Regarding the decline in petty tenancy after the introduction of a new technology, we speculated that this may be because, in the face of uncertainty regarding the exact behaviour of output, it may be very difficult for the landowner and the tenant to agree on a contract. The socio-economically dominant landowner would like to reduce the share of the tenant so as to appropriate all the gains of the new technology; the tenant will resist this process for fear that he may end up even worse off than before. Since the probability distribution of output associated with the new technology

is not precisely known, the implications of a new share  $\bar{r}$  will not be clear. Whatever share is agreed upon, the landowner will not be certain that some of the gains are not being passed on to the tenant and the tenant will not be absolutely certain that he is not getting even less than he was earlier. The problem can be solved if a hired labour arrangement is agreed upon; now a fixed sum can be paid which both the landowner and the (ex)tenant can compare with the earlier income of the tenant and satisfy themselves that they are not being 'cheated'.

#### Petty Tenancy and Technological Change

Having brought together the various strands of argument presented in this thesis, it may be appropriate at this stage for us to return to the original set of questions which we had taken as a reference point for our thesis. We had pointed out, in the introduction to this thesis, that the discussion on petty tenancy (share-tenancy, mostly) had focussed at least two important problems: firstly, the problem of inferring from the existence of share-tenancy anything about a possible broad characterisation of production relations and, secondly, the question of whether or not share-tenancy might inhibit technological change.

We had referred to criticisms by Shah<sup>1</sup> and Rudra<sup>2</sup> of Bhaduri's<sup>3</sup> characterisation of production relations in Eastern India as 'semi-feudal' and his identification of share-tenancy as one of the features of 'semi-feudal' relations. We had also referred to criticisms by Rudra<sup>4</sup> and others, attacking Bhaduri's argument regarding the disincentive for technological innovation (in the context of 'semi-feudal' relations). Discussion of our first question would necessarily take us into conceptual issues which are outside the scope of this thesis. We must, therefore, rest content with having advanced some generalisations regarding the role of share-tenancy in different contexts in colonial and independent India, and leave the task of interpretation to others more qualified for this purpose. However, we would like to offer some comments regarding the question of whether or not petty tenancy may inhibit technological change. We will argue below that to the extent that it is true that, with a new technology, a new share is difficult to agree on and a shift to cultivation with hired labour is required, it may be true that a 'built-in depressor' (to use Daniel Thorner's phrase) does exist. Our argument may provide some slight support to not only Bhaduri's formulation but also to that of Utsa Patnaik<sup>5</sup> (to which we have earlier referred).

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1. Shah (1980)
  2. Rudra (1982), Chs. 2 and 3
  3. Bhaduri (1973a and 1973b)
  4. Rudra (1982), Chs. 2 and 3.
  5. Patnaik (1976), P. A-99.

Let us first consider Bhaduri's argument. We had pointed out that when a totally new technology is introduced, the associated uncertainty regarding the behaviour of output may interfere with the formulation of a new contract. We had mentioned that the tenant may not be willing to accept a lower share for fear that he may become worse off than before. In such a situation, if the landlord insists on going in for innovation, he may have to settle for a share which does allow some of the gains of the new technology to accrue to the tenant. It may happen that, once the behaviour of output under the new technology is completely known, the landlord can again force the tenant to accept a share which leaves him with the same level of income which he had in the pre-technological change situation. However, at least in the intervening period, the tenant may more than before earn. He may, thereby, be able to reduce his dependence on loans from the landowner. This would reduce the landlord's usurious income. At least in the short run, therefore, the possibility mentioned by Bhaduri, of the decline in income from usury outweighing the increase in income due to higher output, may be realised. Also, it must be noted that even if the decline in income from usury does not outweigh the increase in income due to higher output, to the extent that income

from usury does decline the effective rate of return on capital that has been invested will be reduced. Investment in output-increasing innovation may no longer provide a return higher than that available in alternative options. A disincentive to innovate may in fact exist.

Utsa Patnaik's argument to the effect that pre-capitalist ground rent can act as a barrier to capitalist production, and that capitalist investment will take place only if a new technology providing a discrete increase in surplus is available, is best presented in her own words. We quote her on the options facing the capitalist who himself owns land (and does not have to lease it in). She writes: "The argument holds as strongly even if the capitalist does not need to lease in land because he owns it; for in that case he has the option of leasing out his owned land to petty producers and earning pre-capitalist rent. He can either (i) lease out his acre for Rs.  $y$  rent and at the same time use his money-capital Rs.  $M$  in any other sphere ....to bring in an average profit of Rs.  $x$  (ii) or he can cultivate directly; assuming that he invests the entire money capital Rs.  $M$  in cultivation on an acre, it is not enough if the return of surplus is

Rs.  $x$ , comparable to that obtainable elsewhere; the return must be at least Rs.  $x+y$  for direct cultivation to at all be comparable to leasing out. Once again, this will be possible only if direct cultivation involves a discrete increase in surplus per acre compared to petty production. The important point here is that a small or gradual improvement in surplus per acre as a result of technical change is not enough to induce capitalist investment in new techniques; the technical change has to be substantial"<sup>6</sup>. It is striking to note that Patnaik is contrasting only two alternatives; one in which there is no investment and the landowner persists with the petty tenancy arrangement and the other in which the landowner invests and shifts to cultivation with hired labour. The need for a discrete jump in output arises from the fact that, in cultivating with hired labour, the landowner has to provide all the capital whereas, with the tenancy arrangement, the tenant was also providing some (if not all) of the capital. The new technology has to lead to an output which is sufficiently high to not only cover the high rental payment, but also compensate the landowner for now having to provide all the capital. Patnaik does not discuss the case in which investment in a new technology may be undertaken while retaining the petty

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6. Ibid,

tenancy arrangement. In such a case the tenant may continue to provide the capital which he was earlier providing (as well as pay the same rent as earlier), and it may be worthwhile for the landowner to invest, provided his investment results in an increase in output which corresponds in monetary terms to an amount higher than that which can be earned in the best alternative use of the capital. Our argument provides in some measure a justification for ignoring this possibility. If, with the introduction of a new technology the tenancy arrangement becomes hard to retain, it is logical to contrast two polar cases; one where petty<sup>/tenancy</sup> persists in a situation in which there is no investment in innovation and another in which such investment takes place, accompanied by a shift to cultivation with hired labour. We have argued that with a new technology it becomes very difficult for the landowner and the tenant to agree on a share; whatever share is agreed upon there will be no certainty for the landowner that some of the gains of the new technology are not being surrendered; perhaps more importantly, the tenant will be insecure about even retaining his earlier standard of living. We pointed out that in such a situation the tenancy arrangement may break down and it may be necessary to shift to cultivation



with hired labour, in which arrangement there need not be any ambiguity about the level of income being provided to the (ex)tenant. To the extent that this is true, the possibility of investment while retaining the petty tenancy arrangement can be ignored, and pre-capitalist ground rent may constitute a barrier to capitalist investment, as argued by Patnaik.

#### Concluding Remarks

It may, of course, be legitimately asked whether the inflexibility of the tenancy arrangement of which we have made so much is empirically confirmed; whether tenancy arrangements do in fact break-down in the manner described. Literature on such a question is hard to come by and a detailed field survey is outside the scope of this thesis. We can only offer as evidence the following conversation with a landowner in Gairatganj tehsil (Raisen district), Madhya Pradesh, in March, 1987.<sup>7</sup> On finding little evidence of batai (share-tenancy) in the course of our survey, we asked Laxman Singh whether this was in fact generally the case in the tehsil. He informed us that we were wrong; that there was a fair amount of batai in the area. We told him that the big owners we had met

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7. The interview was conducted jointly by myself and Gaurav Datt.

were cultivating with hired labour; he agreed with us : big owners didn't lease out their land, he said. They used high-yielding varieties, fertilisers, tractors etc. and cultivated on their own. Did they earlier give out land on batai? Yes, said Laxman Singh, but not after the new seeds, fertilisers etc. have become available. The reason for this is quite obvious (he said); why should the landlord give the tenant half the output, now that productivity has risen ? We didn't agree; the tenant's income need not rise even if productivity has increased, we said. The tenant's share can simply be reduced to make his income the same as before; if (for instance) output has doubled , he can be given only a one-fourth share instead of half, as earlier. The tenant will not agree, said Laxman Singh : "Unko siraf adhe ki paribhasha maloom hai" (They only understand the meaning of a one-half share). Clearly, the tenancy arrangement had broken down, in a manner not very different from what we would have predicted.

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APPENDIX

In this appendix we prove the proposition asserted in Chapter Three, to the effect that the optimal contract for a risk-averse landowner to make with a risk-averse hired labourer (when the hired labourer must be guaranteed some minimum level of utility and no more) is necessarily one in which the hired labourer's income for the agricultural season as a whole varies as overall output varies. In fact we prove the more general proposition that so long as the landowner and the tenant/labourer are risk-averse the optimal payment made to guarantee a minimum level of utility is a variable one whether or not there is a hired labour contract. The following assumptions are made in proving this proposition.

1. The landowner's utility function is  $F(\text{income in current period})$  and the tenant/labourer's utility function is  $U(\text{income in the current period})$ . For simplicity, we have ignored other arguments in the utility function(s). The mathematical equivalent of the assumption of risk-aversion of the two agents is the assumption that the second derivatives of the utility functions of the two agents are negative.

2. We assume that the utility functions of the two agents satisfy the necessary properties for the Expected Utility Theorem to hold.

3. The "economic prospect" is  $(Y_1, Y_2 ; P_1, P_2)$ , i.e., output  $Y_1$  is expected with probability  $P_1$  and output  $Y_2$  is expected with probability  $P_2$ . To take account of variability in output, we assume that  $Y_1$  is greater than  $Y_2$ . The income given to the tenant/labourer is denoted by the lower-case letter 'y'. The landowner's income is, naturally,  $Y-y$ .

Before addressing the question of the optimal mode of payment we need to derive a result about the marginal rate of substitution between income when output is  $Y_1$  and income when output is  $Y_2$ , for each of the agents. Consider (say) the case of the tenant/labourer. Suppose he is facing the income prospect  $(y_1^*, y_2^*; P_1, P_2)$  which gives him  $\bar{V}$  level of utility. This means that,

$$P_1 \cdot U(y_1^*) + P_2 \cdot U(y_2^*) = \bar{V}$$

Taking total derivatives, we have

$$P_1 \cdot U'(y_1^*) \cdot dy_1 + P_2 \cdot U'(y_2^*) \cdot dy_2 = 0$$

This gives us,

$$\frac{dy_2}{dy_1} = - \frac{P_1 \cdot U'(y_1^*)}{P_2 \cdot U'(y_2^*)} \dots\dots\dots(i)$$

Completely analogously, we have for the landowner

$$\frac{d(Y_2 - y_2)}{d(Y_1 - y_1)} = \frac{- P_1 \cdot F'(Y_1 - y_1^*)}{P_2 \cdot F'(Y_2 - y_2^*)} \dots\dots\dots(ii)$$

In equations (i) and (ii), of course, we have the expressions for the marginal rates of substitution of the two agents.

Now suppose the landowner makes a flat payment, which does not vary with the level of output. This means that  $y_1^* = y_2^*$ . The right hand side in (i) will become  $\frac{-P_1}{P_2}$ . Consider, on the other hand, the right hand side of (ii). Since  $y_1^*$  is equal to  $y_2^*$  and  $Y_1$  is greater than  $Y_2$  (by assumption) the argument in the numerator is greater than the argument in the denominator. Since the second derivative of the landowner's utility function  $F$  is negative (because of risk-aversion) the right-hand side of (ii) will be, in absolute magnitude, less than  $\frac{P_1}{P_2}$ . Thus, the marginal rates of substitution between income when output is  $Y_1$  and income when output is  $Y_2$

are different between the two agents. The amount of income when output is  $Y_2$  which the tenant/labourer is willing to give up for a unit increase in income when output is  $Y_1$  is greater than the same magnitude for the landowner. Clearly, the landowner could increase his utility by giving the tenant/labourer more than  $y_1^*$  when total output is  $Y_1$  and less than  $y_2^*$  when output is  $Y_2$  in such a way that the tenant/labourer continues to get  $\bar{V}$  level of utility and his (the landowner's) own utility increases. Thus, the optimal mode of payment for the landowner involves giving the tenant/labourer a higher income when output rises and a lower income when output falls.

The intuition of our result is quite straightforward. If the landowner gives an invariable payment to the tenant/labourer, his own income will be variable (because output varies). He will, therefore, be willing to give up expected income for reduced variability of income. The tenant/labourer has been totally insured against variability. At the margin, therefore, he is only concerned about expected income. It should, therefore, be possible for the landowner to introduce at least an infinitesimal amount of variability in the tenant/labourer's income, compensating him with an increased expected income, leaving himself (the landowner) with a configuration involving a lower expected income and lower variability, which gives him a higher level of utility.

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