CHAPTER - I

INTRODUCTION
1. The Subject Matter of the Present Study

This study is a modest attempt to analyse the differences in agricultural practices carried out by tribal and non-tribal farmers of the Lakhimpur Block of the District of Lakhimpur, Assam, and recognise the effects of these practices on the overall development of agriculture sector of the Block.

The classification of the farmers in tribal and non-tribal categories has much to do with the patterns, conventions and attitudes of the farmers of the Block. We hold that conventions and attitudes of tribal and non-tribal farmers are significantly different and due to this, agricultural practices carried out by them differ significantly. These differences have significance with regard to utilisation of land and other material inputs for raising crops and, in turn, the overall development of agriculture sector in the Block.

2. Some Doctrines at Odds

In the literature on agricultural economics there has been rather a convention to scoff at the approach that we have adopted in this study. To quote T.W. Schultz, a widely acknowledged authority on agricultural economics stimulating a vast research work in India:
The niggardliness of agriculture in poor communities is frequently attributed to particular cultural values.... As a rule, however, it is not necessary to appeal to differences in such cultural values, because a simple economic explanation will suffice.\textsuperscript{1}

No less amount of criticism has been faced by us when we had discourses with a number of scholars on our approach of study. Frequently, it was argued that we are illicitly assigning the causes of low productivity to "tribality". It was alleged that the views held by us are reminiscences of the Western views on the causes of underdevelopment of colonials.\textsuperscript{2}

It is felt necessary, therefore, to discuss in detail why we hold a particular opinion and to substantiate it by empirical evidences. This study is motivated to attempt at the same.

3. T.W. Schultz's "Simple Economic Explanation"

The gist of "Simple Economic Explanation" of low productivity of agriculture forwarded by Schultz is as follows:

In a particular community the low productivity of agriculture is due to (a) unfavourable attitude towards work, (b) contempt of literate youth towards manual work, (c) lack of thrift and wasteful consumption, (d) the lack of the virtue of being industrious. Due to the factors
enumerated above low input of labour and capital in agriculture is made and thus it results into low productivity.

But the four factors noted above are none of the cultural variables as they can be well explained by economic arguments.

Differences in work, thrift and industry related to economic activities can be handled as economic variables. It is not necessary to appeal to cultural differences to explain particular work and thrift behaviour because economic factors provide a satisfactory explanation. Incentives to work more than these people do are weak because the marginal productivity of labour is very low, and incentives to save more than they do are weak because the marginal productivity of capital is also very low.3

Now, let us see what Schultz has to say on the reasons of the observed low marginal productivity of labour and that of capital.

It is an equilibrium at which agriculture gradually arrives over a long period, provided particular conditions prevail.... The critical conditions underlying this equilibrium are as follows: (1) the state of arts remains constant, (2) the state of preference and motives for holding and acquiring sources of income remains constant, and (3) both of these states remain constant long enough for marginal preferences and motives for acquiring agricultural factors as sources of income to arrive at an equilibrium with the marginal productivity of these sources viewed as an investment in permanent income streams and with net savings approaching zero.4
As agriculture approaches the particular equilibrium..., the marginal productivity of investment in additional agricultural factors continue to decline. There then comes a point when the rate of return is so low that there is no longer any incentive to save for additional investment in these factors.5

The low level equilibrium postulated by Schultz implies that "there are comparatively few significant inefficiencies in the allocation of factors of production in traditional agriculture."6 This implication has been empirically substantiated by him through the findings of Sol Tax in "Penny Capitalism" which shows that farmers of Guatemala are very poor traditional farmers and they are very efficient in allocating their resources. One more case has been cited: the study by W.D. Hopper, "The Economic Organisation of a Village in North Central India" which shows that the farmers of Senapur are poor but efficient allocators of resources.

Based on the two case studies referred to above, Schultz concludes:

The community is poor because the factors on which the economy is dependent are not capable of producing more under existing circumstances. Conversely, ... the observed poverty is not a consequence of any significant inefficiencies in factor allocation.7
4. A New Question: Can it be explained by Schultz's Hypothesis/Theory?

Now let us think of a situation as depicted here:
There are two communities living for generations in quite identical geographical economic, political and meta-social environment. Both of them are exposed to the same market situations for selling their products as well as for purchasing material inputs. Both are equally free to allocate their resources to raise crops, spend their income frugally or thriftily as they desire, adopt agricultural practices as they think fit; but productivities on their farms differ significantly. These communities are open to each other—each can learn unconstrainedly from the other if one thinks fit to do so. Ownership of resources among these communities also is not dissimilar. Then too, one community produces less per area cultivated while the other community produces more. Both of them are traditional farming communities— but one produces less than the other. For Schultz,

The people are obviously hard working, thrifty and acute in selling their crops, renting land, and buying things for consumption and production. The community is not an isolated subsistence economy, but is closely integrated into a larger market economy. Yet, hoes, axes, and machetes are not replaced by better tools and equipments. There is not even a wheel. Coffee leaves used as fertilizers are not replaced or supplemented by chemical fertilizers. Traditional varieties of corn are not replaced by hybrid seeds.... The traders and firms in the
towns that serve this community are not offering for sale any of the superior factors. If one wanted to plan a community like Panajachel that would go on for decades without any change in the state of arts on which it was dependent, it would strike one as impossible within the market economy of Guatemala. Yet Panajachel has been doing the impossible in this respect for generations.

is a great puzzle. For us; Two communities working under identical, political, economic, geographical and metasocial situations, endowed with same resources produce significantly different amounts per bigha of land they cultivate: is the puzzle. Our puzzle is more intriguing because Schultz's economic explanation proves of no avail to help us solve the puzzle. Naturally, our hypothesis is; what Schultz has emphatically denied to be of any relevance and what his followers have scoffed at, are the real explanations, and the observed differences in productivity are explainable only in terms of "cultural differences".

5. An Institutional Approach to Economic Analysis

We would not, however, call them "cultural" differences — rather we will use the term "Institutional" differences. By "Institutions" we mean the settled habits of a community with regard to thinking and acting. In this study we will empirically corroborate the stand that the settled habits of thinking and doing have decisive impacts on the
economic performance of the farmers and hence, without taking these facts into account no analysis of economic behaviour can really make a point. We will show how the tribals of our study area believe that sowing by women gives larger amount of product. They worship the mother of earth and spread paddy seeds ceremonially. The dance sequence is performed and it is believed that it appeases the divine power who bestows upon them a good harvest. In the middle of cultivation they perform rituals so that ancestral spirits may protect the flowering sprouts from pests and other natural calamities.

It may be noted that due to the beliefs mentioned above, female participation in agriculture is increased. Now, in the family farming the explicit cost of cultivation is low and it affects the "cost-sensitiveness" of the farmer. This, in turn, affects "return-sensitiveness" also. On the whole it adversely affects the efforts of the farmer to improve agricultural practices.

Such beliefs as a good harvest or otherwise is due to the wishes of God or gods (observing Ali Ai Ligang) also indicates that on the part of the tribals there will be few efforts to seek the earthly causes of good harvest or bad harvest and to improve upon the existing practices of
cultivation. Such a system of believing and acting accordingly is the characteristic feature of tribal farming which results into low yield.

6. Schultz's Thesis of Allocative Efficiency Examined

The thesis of allocative efficiency is primarily based on the postulate of rational economic behaviour. Secondly, it is based on so many other assumptions which often do not come out in explicit statement and thus remain tacit. Ashok Rudra has dug out these tacit assumptions.

If each farmer is using inputs and producing crops in such a fashion as to maximise profit, if farmers are not subject to constraints which are different for different farmers, if they are subject to the same production function, and if they are faced with the same product and factor prices,... No observer has, however, come and reported such a perfect heavenly harmony in any part of Indian agriculture ... that there is a certain size distribution, and that different farms even with the same soil quality use inputs in different quantities and produce crops in different combinations is sufficient to demolish the said analytical framework for being fantastic and absurd.10

Further, Rudra shows how the use of geometric average as used in testing the efficiency hypothesis is a sure proof (under the condition of different holding size of different farmers) of their allocation being inefficient by the very implication of the model itself. By pointing out the inherent contradiction in the method how efficiency
hypothesis has been tested in the literature Rudra draws our attention to the fact that no considerate analyst will seriously make any attempt to test the hypothesis of allocative efficiency in the prevailing situation. But this issue is not our central point of discussion.

We will rather embark upon the first and primary postulate of "rational behaviour." Let us see what T. Scitovsky\(^1\) opines about rational behaviour:

Economics, having originated in the age of reason, has adopted the rationality of man as one of its basic postulates. Today, in the age of unreason, psychologists and psychoanalysts have gained a lot of understanding of the dark, irrational forces that motivate men; but while the general public has readily accepted their interpretation of human motivation, the economist – perhaps only among social scientists – still clings to the assumption of human rationality ... whatever psychoanalysts may say to the contrary ... man is neither wholly rational nor wholly irrational. From the proven rationality of a limited aspect of his behaviour one cannot deduce that he is rational in everything – just as one cannot generalise from the manifest irrationality of some of his behaviour characteristics either .... Not surprisingly, perhaps, economists are human. They sometimes do and sometimes do not find what they are looking for; but very seldom do they find what they are not looking for. Their faith in man's rationality is almost absolute!\(^2\)

Viewed as such, there is no reason to believe why a particular community will behave extremely rationally in allocating resources such that farming will produce the
maximum amount of output per unit area of land or allocate resources perfectly rationally between consumption and investment and so on.

Alternatively, one may think of humanity as a species of animal which got its substantial biological type definitely established thousands of years ago. But since then while the race, this species of animal, has been keeping substantially the original type, there have been enormously large changes in the way in which the species has lived. The change is:

Due substantially not any improvement in the human brain, but to the gradual accumulation of certain habits of thinking. The reason why the life the people live now ... is that men have gradually through their minds acquired certain ways of utilising the world around them to satisfy their needs. In that process there have been built up elaborate societies .... They have acquired queer tastes .... Men acquire habits of thought unconsciously through the exercising of their powers, which means that the kinds of thoughts that men get is shaped by their daily activities.12

Rationality of human behaviour as postulated by economists is one among those habits of thought which are characteristic of a modern age and mainly abstracts the habit of business calculation. They are drilled into the part of the population which is engaged in the task of business management.
What the orthodox economists following Bentham have been doing substantially is to impute this particular habit of thought, this institution, to mankind at large, and to argue about how people would behave in case this is the only economic institution of consequence in contemporary societies. One may say, therefore, that the orthodox economic theory can be regarded as a monographic treatment of the logical implications of one set of economic institutions.  

From what has been noted above, one thing is clear. If two communities have developed two sets of institutions—two sets of settled habits of thinking and doing—activities on their farms may differ significantly, irrespective of the fact that the economic, political, geographical and meta-social environments they live in are identical. The only difference that would be observed among these communities is the way they carry out farming and why they carry out farming as they do would be explained only by what are the differences in their institutional set up. If one makes an effort to seek the causes of the observed differences in Schultzian style, nought will be explained.

7. A Consideration of X-efficiency

We have already noted that the thesis of allocative efficiency rests primarily on the axiom of rationality and
rationality in Economics is synonymous with "market rationality". That is to say that farmers allocate their resources in such a way that the economic benefit over and above costs are maximised.

Now we want to raise some fundamental issues. We would like to examine the concept of optimality. Notionally, optimality is a state attained (or possibly attainable) by a decision maker, by choosing appropriate levels of certain decision variables, which represents the most desired level of the aspiration function consistent with a set of constraints impinging on the aspiration function directly or indirectly through the decision variables. Operationally, such a state can be attained only if the aspiration function is clearly, unambiguously, determinately and statically defined. But now let us think of a situation in which aspiration function is fuzzy, stochastic or dynamic. These qualifications may be equally effective for constraints also. Under such a situation, the most rational decision maker will make discounts for fuzziness, stochasticity and dynam- icity of the whole decision field. But an unconsiderate analyst may, however, try to test his optimality hypothesis unduly considering the aspiration function and constraints crisp, deterministic, static and well defined. There will be now a difference between what the analyst is seeking and
what he really gets. This gap may be, in some sense, recognised as X-efficiency.

Why then must we think that the farmers in a particular community must allocate their resources so as to maximise their net benefits over costs of inputs in the light of the knowledge of product and factor markets? To be purely Benthamite, the farmers must indulge in a calculus of pleasure and pain, and going against the set values and practices may be felt more painful and much less pleasurable. If the farmers of a community feel happier in rationalising the farming practices adopted by them both when they produce more and when they produce less, how can one hold for sure that they act irrationally? In this sense, rationality becomes a metaphysical concept that defies empirical testing altogether.

Most business firms fail to minimise costs per unit of output either because some of the inputs they employ are not marketed or because the production function, the technical relationship between inputs and output, cannot be completely specified or fully known; more generally, 'X-efficiency', or rather the non-allocative aspects of inefficiency, is due to inertia, a conservative desire for manoeuvring room, and imperfections in markets for knowledge.14

Economic agents are typically non-maximisers but gradually adopt maximising behaviour as external pressure on them increases.15
Now, in a family farming, as has been noted earlier, cost-sensitiveness as well as return sensitiveness of farmers is rather poor and blunt. Due to subsistence farming there is hardly any external pressure felt by these farmers. It is no surprise then, that much is left for X-efficiency to explain. The contribution of X-efficiency on productivity may be suitably explained by "Institutional" factors, which cannot be explained by the Schultzian theory or economic arguments.

The belief system of a particular community may be untrue and such a system of belief would, epistemologically, not be considered as knowledge. Actions based on such a belief system may not lead one to the goals aspired for; at worse, they may detract the achievements farther from the goals that could otherwise have been met. From this point of view such a belief system may either be considered as an absence of knowledge or a misplaced confidence. Nevertheless they are apt to be rationalised and not to be improved in the light of experiences.

8. A Revisit to the 'Tribality' argument

If tribality argument labeled against our approach is based on the suspicion of racial prejudice that might be germane to such an approach, we must explicitly declare that we do not hold any particular institutions to be intrinsically and characteristically associated with any particular
race. Nor we hold that a particular set of institutions prevalent in a particular community at a given time will necessarily continue to prevail in future also. But a particular set of people (and their offsprings) belonging to a particular tribe will remain members of that particular tribe for ever. No Santhal will ever become a Munda and no Missing can become a Boro. But no set of institutions are such as to be characteristically and unalterably associated with Santhals, Munda, Missing or Boro or any other tribal community or any non-tribal community for that matter. Beliefs and attitudes change. They change automatically with changing economic, technological, political and meta-social environment and they can be moulded deliberately and in a planned way.

What we want to stress, however, that a particular community, tribal or non-tribal, has a particular set of beliefs, attitudes and valuations — institutions prevailing at a given point of time and these institutions may be different from those prevailing among other communities. These differences — their nature and genesis are what the social scientists study. These differences have relevance with regard to explanation of differences in economic behaviour and performance of different communities. We shall try to remember throughout our enquiry that material facts
in large measure are the product of what people think, feel and believe. 16

9. A Note on Agricultural Practices

As it has already been proclaimed in the opening section of this chapter, the present study aims at analysing the differences in agricultural practices carried out by tribal and non-tribal farmers in Lakhimpur Block of the District of Lakhimpur, Assam, and recognise the effects of these practices on the overall development of the agriculture sector in the Block. It is necessary, therefore, to describe what we mean by "agricultural practices" in the present study.

"Agricultural practices" refers to a multifaceted entity. It has four major facets, namely, (1) technical, (2) economic, (3) institutional, and (4) coercive.

The 'technical' facet of agricultural practices comprises of the types of inputs used, types of agricultural output produced, the structure of input and output mix, rotation of crops, single or multiple cropping, the techniques used for harvesting, sowing, storing, transportation to market, etc.
The 'economic' facet of agricultural practices comprises of the exchange relations of the farmers in product and factor markets and how the farmers use explicit, imputed or expected prices as signals for his allocative decision-making.

The 'institutional' facet of agricultural practices comprises of the beliefs, attitudes, values and social relations held by the farmers in general which motivate, justify, and rationalise the technical and economic aspects of agricultural practices carried out by the farmers as a particular community.

The three facets of agricultural practices above have a full scope for individual wishes or desires to operate. There is nothing in them that compels or restrains a farmer by force or authority to choose one or to discard another type of agricultural practice. But the coercive facet, sometimes at work, forces a farmer to adopt one type of practices and to discard another type of practices against his volition, on the instructions given to him by some human agent. For example, if a tenant farmer cultivates a particular crop not because he finds it fit, but because his landlord wishes him to do so and disobeying him may result into ejection. In such a case, the agricultural practices adopted by the farmer in example has a coercive facet also.
It is obvious that these facets of agricultural practices are not unrelated with one another. They cut across each other and influence each other significantly. These facets of agricultural practices change their structure under the influence of changes in property rights, creating incentives for economic action; technology, creating possibilities for changes in the process of production and resource utilization; and ideology, the system of moral and ethical beliefs which influences how the perception of individuals and a community are translated into action.  

10. The Methodology of the study

We purport to study the differences in agricultural practices and their impacts on agricultural development in the Block of Lakhimpur empirically through selecting some villages from the Block. The selection of villages is based on our proclaimed objective of distinguishing the tribal agricultural practices from the non-tribal ones. For such a study we have selected two villages; one inhabited by tribals exclusively and another inhabited by non-tribals exclusively. Nevertheless we want to study the stability of tribal agricultural practices under the condition of an explicit exposure to the non-tribal agricultural practices. Hence we select a third village inhabited by a mixed population - where tribals and non-tribals form approximately a ratio of two to one.
Mahaijan (Mishing), the village that is exclusively inhabited by tribal population has 65 households, while Sonari village, exclusively inhabited by non-tribal population has 92 households. Badhakora, the village inhabited by the mixed population has 224 households, out of which 148 are tribals and 76 are non-tribals.

In Sonari village about two-third of workers are engaged in farming and about one-third of the workers are engaged in non-primary occupations or activities, the majority of whom are in service in the North Lakhimpur town. A few are engaged in trade and commerce in the village. In Mohaigan and Badhakora villages over 90% of the worker population are engaged in farming and the rest are engaged in commerce and traditional household industries.

In view of the limitations that we face, we have selected thirty households from each village for collecting data. For Mohaigan and Sonari villages we prepared two separate lists of households exclusively dependent on agricultural activities (not engaged in secondary or tertiary sector occupations) and order-listed them (separately for both villages) according to the first name of the head of the household. From these lists we identified thirty households in both the villages using the systematic sampling
procedure. In case of each village, the first household was selected by random selection. But for the village Bodhakora we prepared two lists, one for tribal farmers household and the other for non-tribal farmers household. Both lists were ordered in accordance with the first name of the head of the household. Again, from each list we selected proportionate samples following the systematic sampling procedure.

Table 1.1.

<table>
<thead>
<tr>
<th>Name of the village</th>
<th>No. of households</th>
<th>Households exclusively engaged in farming</th>
<th>No. of sample interviewed</th>
<th>Sample as % to total population</th>
<th>Sample from tribal households</th>
<th>Sample from non-tribal households</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mohaijan</td>
<td>65</td>
<td>58</td>
<td>30</td>
<td>52</td>
<td>30</td>
<td>0</td>
</tr>
<tr>
<td>Mishing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sonari</td>
<td>92</td>
<td>52</td>
<td>30</td>
<td>58</td>
<td>0</td>
<td>30</td>
</tr>
<tr>
<td>Bodhakora</td>
<td>224</td>
<td>209</td>
<td>30</td>
<td>14</td>
<td>18</td>
<td>12</td>
</tr>
<tr>
<td>Total</td>
<td>381</td>
<td>319</td>
<td>90</td>
<td>28</td>
<td>48</td>
<td>42</td>
</tr>
</tbody>
</table>

A gist of the sampling strategy adopted by us is represented by the figures in table 1.1. It may be observed that we have tried to represent tribal and non-tribal farming households in the mixed village by our samples proportionate to their populations and moreover, we have tried
to draw almost equal number of tribal samples as the non-tribal samples so that their proportion is quite even in the total samples drawn.

We have thought it unnecessary to keep up proportions with regard to number of households in each village. Were we to keep up these proportions, either we had to draw too few samples from Sonari and Mohaijan, or too many samples from Bodhakora villages as the numbers of households in the three villages are largely uneven. The last alternative would have strained us on account of our limitations while the first alternative would have been inadequate to represent purely tribal agricultural practices. Moreover, we have considered it unnecessary to represent villages; for our purpose, representation of tribal farming households and non-tribal farming households is more important.

After the sample households in each village were identified, we approached them with a pre-tested questionnaires. We filled in the questionnaires by the direct interview of the head of the household.

After filling in the questionnaires, we tabulated them and constructed required measures to facilitate our analysis. Throughout our study we have relied considerably on statistical analysis of multi-variate type.
tion for these statistical methods used by us are elaborated as and when they have been applied in the subsequent chapters.

Applicability of very sensitive and rigorous statistical methods might be very limited in the present analysis in view of the inflexibility and poor sensitivity of the system which we are trying to study and a great deal of reporting inaccuracies and poor quantifiability of data that could be collected by us. Hence, wherever possible we have preferred to use more robust statistical methods and to avoid using sensitive statistical methods. In testing the hypotheses as well, we have been less stringent in matters the level of significance chosen. We hold that in face of the problem and data we are dealing with, such an approach is justifiable.

After the exercises of analysis, we have attempted to suggest some guidelines for the development policy with regard to the agriculture sector of the Block. These suggestions are partly based on the present study and partly on extraneous studies the author is aware of. In making these suggestions we have kept in mind that it is not enough to provide modern inputs, irrigation facilities and finance to the farmers; they must be motivated to change
their attitudes and value system. We recognise the community mores to be an important determinant of economic achievements of a community. Mores change through time, but usually the rate of change is very slow. For rapid change in them in a desirable direction a great effort of educational planning is required. That is what we have suggested.
REFERENCES


3. Schultz, ibid., p. 28.


5. Schultz, ibid., pp. 31-32.


7. Schultz, ibid., p. 48.

8. Schultz, ibid., p. 35.


