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INSTITUTIONAL STRUCTURE AND CAPITAL FORMATION

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One commonly comes across articles in which the authors discuss of capital formation, savings, investment, input-output ratio, all in the same breath. Some references to 'Linear Programming' and 'Lorenzo's Curves,' etc., is also not considered out of place in such an article. In this whole process, the absence of incentives for the cultivator is lost sight of as if it is an unimportant matter. The points which are indicated by the prolificity of such studies are that (1) we, economists, have not been fully aware of the limitations of our statistical techniques and of the available data; (2) in our anxiety to harness available data for saying something new we have under-emphasised the role of the institutional framework and we have lost sight of the importance of regional variations. The following discussion in this paper deals with each of these aspects.

PROBLEMS OF STATISTICAL DATA

Thanks mainly to the painstaking, sustained and dedicated work of the Gokhale Institute of Politics and Economics, Poona, we, in India, are now becoming increasingly aware of the importance of field surveys and their potentialities in policy formation. We do have now in India under the auspices of several official and non-official institutions, a series of surveys in operation, the results of which can be tapped if only the data are analysed painstakingly by dedicated research workers. While these aspects are the brighter side of the picture, there are many 'gaps' in our knowledge and techniques which require immediate attention if we, economists, are to be in a position to play the role expected of us in the planning process. These 'gaps' are best described in terms of difficulties arising at specific situations/ features which can be enumerated as arising out of (1) institutional structure, (2) sampling techniques, (3) reporting by respondents and (4) conceptional ambiguity.

Institutional Structure

The 'Agricultural' sector, in effect, contains several sub-sectors, namely, (*a*) Household sector, (a1) owner-cultivators, (a2) tenants, (a3) landlords, (a4) landless labourers, (*b*) Co-operative sector and (*c*) Government sector. Further, the household sector consists of two categories, (*i*) rural residents and (*ii*) urban residents. We do not have as yet any estimates of capital formation for each of the sectors referred to above. We have some estimates for the Rural Household Sector as a whole but have little data about capital formation in agriculture originating in the urban sector. In fact, we do not know the exact importance and magnitude of this source of capital formation.

Secondly, for all statistical estimates, we have treated family (either cultivator—or non-cultivator) as the unit representative of the household sector with

* The views expressed in the paper are not necessarily those of the organisation with which the author is connected.

all its implications of probability theory. We have done it because we have not yet evolved a better technique. But we still have doubts about the validity of this method because (*a*) the rate of investment and capital formation varies from one family to another depending upon not only the size of cultivated holding but also other factors such as (1) ownership of land, (2) mode of labour (family/permanently hired, seasonally hired) used for cultivation and (3) fertility and type of land with particular reference to the existence of improved techniques capable of use on a particular type land, for a particular crop and for a particular size of holding, (4) extent of development of transport and marketing facilities, (5) availability of credit facilities, (6) security of expectation regarding prices receivable. If these aspects, either jointly or severally, are more important determinants of the rates of capital formation than what 'size of holding' is, then it is time we re-examine the usefulness of estimating rates of capital formation after selecting or classifying rural cultivating households only according to size of holding, or size of gross produce, etc.

Sampling

Apart from the issue whether one should use 'size' or some other 'measure' as criterion either for selecting units for investigation or for subsequent tabulation of data collected from a random sample, there is the question as to whether 'family' is a good enough unit for sampling. Could not 'cultivated plots' be more usefully selected as the primary unit ? Even assuming that 'family' can be used as a unit of sampling, can we work out averages for the "cultivator" as a whole without taking into consideration the fact of large variations (*a*) in distribution of (cultivated as well as ownership) holdings, (*b*) in availability of facilities such as credit, marketing, transport, access to technical knowledge, etc. That it is particularly dangerous to ignore these institutional aspects can be indicated by a schematic table (Appendix I) based on notional figures.

If in a village or any sampling unit, the actual pattern is similar to the notional type[1] envisaged in the table, it will be apparent that whatever the method of sampling or tabulation, there will be sizable variations between the estimates and the actual position. To get at the correct figure, it is theoretically possible to evolve a suitable design but it will not, in all probability, be a practical proposition. Would the magnitude of variations between the estimates and the reality be so large as to make such surveys useless ? The answer is in the negative, if the scope, objectives and limitations of surveys are clearly understood by those using the data.

Reporting

Students of rural surveys are also bothered about the fact that we have not yet evolved a fairly precise method for ensuring correct reporting by the interviewed cultivators. While "expenditure of funds approach" is perhaps superior to the other two approaches, *viz.*, 'net changes in assets position' approach and that based on "net savings estimated by juxtaposing income and expenditure," a study of both the 1951-52 data (based on All-India Rural Credit

1. If another criterion, *viz.*, "mode of labour used" had been added, the table would have been far too complicated. Though this is as important a factor as any other used in the table, it is not used for simplicity in presentation.

Survey) and the 1961-62 data (based on All-India Rural Debt and Investment Survey) shows the great need for an urgent study of the research methodology and survey techniques.

Concept

Difficulties in defining precisely the terms "Investment" and "Capital Formation" so as to be of use in co-ordinating rural surveys have been elaborated at great length in the Rural Credit Survey Report. Though some advance has been made in this regard, one has to concede that we have not yet reached a stage when these data collected in All-India Surveys can be used for input-output studies.

To sum up, at our present stage of knowledge about rates of capital formation in rural areas, statistical jugglery at formulating models on the basis of incomplete data is likely to be of little use to the practical men responsible for policy formation.

INSTITUTIONAL FRAMEWORK AND CAPITAL FORMATION

The foregoing discussion emphasises the meagre utility of the projections of rates of capital formation or growth rates in agriculture, based as these projections are (*a*) on data and estimates having severe limitations and (*b*) on "rates" for the sector as a whole rather than for different sub-sectors. Rate of capital formation by owner-cultivator is likely to be higher than by tenant-cultivators. Rates in case of cultivators who have at command such facilities as credit, access to market information, contacts with technicians and executives of departments of agriculture, public works (irrigation), co-operation and Community Development Project authorities, are bound to be higher than in the case of those who do not. While under certain circumstances in a given area larger farmers may fare better than the smaller ones, in other situations, the reverse may be the case. The discussions in *The Economic Weekly* on whether productivity in case of bigger cultivators is higher than that in smaller cultivators should make us aware that such generalizations can be valid only for certain areas and situations rather than for the political units. Similarly, while in some situations family farmers (using mostly family labour) may fare better than those who depend mostly on hired labour (not necessarily modern capitalist type of farming), in other situations because of the economies of scale the reverse may be the case.[2] Availability of credit in adequate quantity and on reasonable terms and conditions, which may vary from area to area and one political unit to another would also have a direct bearing on the rates of capital formation. Better marketing facilities and assured prices in a particular type of crop-economy would also influence significantly the growth rates in agriculture. This is not to imply that the problem is too complex for any reasonable deductions. What is suggested is that many of our views on controversial matters are sometimes based on inadequate data and limited experience. The dominant feature that, however, emerges from a careful study of the available data is the importance of the institutional structure to the rate and pattern of capital formation.

The more important aspects classified under the category of "institutional factors" referred to in the foregoing paragraphs can be related mainly to two

2. This may be cited as same as a case for co-operativisation of small farms.

important socio-politico-economic features, namely, land tenure and tenancy system, and co-operatives (credit and marketing). Both in regard to land reforms and co-operative development schemes, our achievements, as is well known, are not exactly satisfactory. The basic contention is that the growth in agriculture or rate of capital formation is far below the one that is necessary (whatever may be the exact rates), and that this unsatisfactory feature is ascribed to the faulty institutional framework. As long as the institutional framework does not provide the necessary incentive to the producer, any talk about relative priorities for industry and agriculture in the overall financial outlay appears to be out of place. This is so because it is quite possible that given the necessary organizational effort, a satisfactory institutional framework can be created without much burden on the limited financial resources.

POLICY AND IMPLEMENTATION IN THE PAST

The question which can be justifiably asked at this stage is: "But we do have a 'Land Reform Policy;' we have a well thought out scheme for development of co-operatives. Should not the reasons be sought for in some other field ?" The answer is, "No". The faulty institutional framework continues to hamper capital formation, for land reforms have not been successfully implemented and co-operative development schemes have been undercut by the vested interests. There is ample evidence in the various rural surveys to prove this point. A co-ordinated price policy, which is most necessary for providing incentives is conspicuous by its absence. The under-paid and harassed agricultural scientist-cum-extension worker, though he comes from middle classes, has at least one thing in common with the agriculturist—that is lack of incentives. The co-operative department official, though slightly better paid than agricultural official, does not enjoy a sinecure position, as those person or groups of persons who are undercutting co-operative development schemes are verily those who have direct access to higher officials of the Department. He, therefore, has the Hobson's choice of selecting between two alternatives : Success of a co-operative in a village and better confidential reports. The rate of increase in the wholesale price index is generally higher than the annual increment of Rs. 5 to Rs. 10 enjoyed by the officials, whose pay-scales cannot be considered as enviable even when compared to those of clerks in private firms in metropolitan areas. In fact the institutional framework, within which the government officer entrusted with development schemes operates, is not far superior to that within which the cultivator functions. Perhaps, a justifiable question is, which of the two needs to be improved first ?

The record in regard to policy formulation is also such as not to permit one to say that the policy is well-formulated and that it is the implementation which is half-hearted. Such a half-true statement is likely to result in dangerous complacency at the policy formulation stage. An integrated policy for land management and policy for decentralization of the planning process, both recommended by Prof. D. R. Gadgil (at the Agricultural Economics and Agricultural Statistics Conference) have yet to see the light of the day. An integrated policy for co-operative farming is yet in the process of formulation. As a result of vacillation in policy regarding other co-operatives, it is not always certain that the district officials have clearly understood the policy directives.

Between the two stages, policy formulation and implementation, there is the important stage of drafting of an action programme, which is a product of team-work between economists, policy framers, administrators, legal experts and district officials. The danger of treating circulars, which enumerate only broad aspects of a policy and request district officials to implement the policy, as action programmes is far too real to ignore. Because this one step of "action-programme," has been generally by-passed or skipped, today we have several examples of measures which have yielded little fruit though policy has been correctly formulated. The question which one has to ask himself at this stage is, "Do we not need a more clear-cut action programme within the accepted policy, for solving such problems as (1) eviction of tenants by illegal means, (2) manipulation of land records, (3) dissolution of dormant societies and organization of new ones in their place, (4) merger of central co-operative banks, where there are two small ones, (5) co-ordinated implementation for consolidation of holdings scheme and land reform measures, and *ad infinitum?*"

The last mentioned item leads one to examine whether we should not have a programme for institutional change (covering land reforms, co-operatives, land management, etc.) which is as comprehensive in conception as the community development programme was when it was initiated. Unfortunately, the emphasis in community development has been, whether deliberately or inadvertently, on resource development involving use of better technology and co-ordinated administrative action by the governmental agencies. But rarely, if ever, a comprehensive programme has been deliberately planned with a view to making a change in a given institutional framework. The programmes involving institutional change have ordinarily been left to routine departmental agencies acting in an isolated manner, if not, at cross-purposes. The implementation of such reforms is, therefore, understandably half-hearted and unco-ordinated. Is it not time, that in a few pilot districts we should try to implement fully and in a co-ordinated manner such schemes as land reforms, co-operative development schemes, land management schemes, etc. ? The experience of pilot project could surely enable State Government to implement such schemes more successfully in other districts.

SUMMING UP

To Conclude:

(1) Our statistical achievements are far too limited to facilitate any valid projections of 'growth rates' and the use of "growth rates" and rates of capital formation in formulating a detailed policy for agricultural development. Judgment, experience and acumen together with the aid of what little statistical data we have will have to be used in policy formulation.

(2) The available statistical evidence indicates that rates of capital formation show significant variations from one institutional framework to another. It is, therefore, necessary that while enunciation of broad objectives of a policy can be attempted at the all-India level, the formulation of a detailed policy for agriculture needs to be done at a level not higher than a State, and the drafting of the action programme at a level not higher than a district. We have in the past ignored the importance of regional variations at a great cost to ourselves.

Programmes for stimulating investment on farms should be worked out, in whatever brief outlines that is possible with our knowledge, for each region within the district and such regional programmes need to be co-ordinated at the distict level for facilitating implementation.

(3) One cannot also ignore the importance of "administration" and "management" aspects of any reform or development scheme. Changes in institutional framework for providing incentives to cultivators can only be carried out by the district officials who themselves should have some incentives and satisfactory working conditions.

(4) While one should not ignore the question of the relative priorities between agriculture and industry, it is dangerous to treat growth rates in agriculture as related only to total financial outlay for that sector. It is possible to step up rates of capital formation in agriculture, without too much additional financial outlay, provided the people apply their mind to the organisational effort for changing the institutional framework within which the cultivator operates. Shortage of technical and financial resources is much less severe than that of organisational effort directed towards changing the institutional framework. Package programmes for resource development (such as I.A.D.P.) need to be co-ordinated with similar co-ordinated programmes for a planned and deliberate change in the institutional framework, if not on a country-wide scale, at least on a pilot basis in a few districts.

And, finally, (5) study of "growth rates," rates of capital formation, capital-output ratios, etc., cannot be divorced from an assessment of the effects of a given institutional framework.

APPENDIX I

NOTIONAL VARIATIONS IN HOLDINGS AND RATES OF CAPITAL FORMATION IN A VILLAGE

(area in notional units)

S. No.	Categories	No. of families	Owner cultivated area	Tenant cultivated area	Owned land area (Total)*	Average rate of capital formation per unit of: Owner cultivated land	Average rate of capital formation per unit of: Tenant cultivated land	Total capital formation: Owner-cultivator	Total capital formation: Tenant-cultivator
1	2	3	4	5	6	7	8	9	10
Cultivators									
I. Large :	Owners	24	60	—	60	15	—	900	—
II. Medium :	Owners	25	20	—	20	10	—	200	—
III. Medium :	Owner-Tenants	7	10	25	35	10	5	100	125
IV. Small :	Owners	8	5	—	5	10	—	50	—
V. Small :	Owner-Tenants	8	5	10	15	10	5	50	50
VI. Small :	Tenants	8	—	10	—*	—	5	—	50

(*Contd.*)

APPENDIX I—(*Concld.*)

1	2	3	4	5	6	7	8	9	10
Non-cultivators									
VII.	Non-cultivating land-owners	1	—	—	5	—	—	—	—
VIII.	Landless tenants illegally evicted	6	—	5	—	—	5	—	25
IX.	Landless labourers	11	—	—	—	—	—	—	—
X.	Other non-agriculturist	2	—	—	—	—	—	—	—
	=	100	100	50	140*	—	—	1,300	250

* Exclusive of land owned by absentee landlords residing outside the village.

RATES OF GROSS AND NET CAPITAL FORMATION IN INDIAN AGRICULTURE AND FACTORS INFLUENCING THEM

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HYPOTHESIS

In agriculture in under-developed economy, substitution between factors is likely to be low (since both the technical research and the knowledge of the people are likely to be low). If the elasticity of substitution between capital and labour is low, the percentage share of return to capital in total gross product tends to increase with the increase in labour supply. Besides, the increased demand for farm products on various scores leads to the increased derived demand for capital. It is because of this that we witness, contrary to general belief, a strong inducement to invest and therefore sizable savings with agriculturists. But this low factor substitution is both an asset and a liability. Whereas on one hand, a change in factor endowments in favour of one (here labour) would result in making expansion of the other (here capital) very attractive, on the other, this process of adjustment abruptly comes to an end, as soon as the pre-change factor ratios are approached. Any voluntary expansion of the 'other' factor beyond this point then becomes unattractive. This particular situation of low factor substitutability then acts both as a strong influence for capital to expand to catch up with labour, as well as a severe limitation to expansion beyond this to induce economic growth and a better deal for the co-operating labour. The impact of this phenomenon is that investment is largely made in traditional assets such as bullocks, implements etc. Land being the scarce factor, investment in irrigation which is a land-substituting form of capital also claims a lion's share.