

What is Economic Research?

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Today, no branch of human knowledge is so much under critical scrutiny and reappraisal as Economics. In developed countries for decades- if not centuries too, economists have had a pride of place in the formulation of policies both at the national and sub-national level. In the last decade or two with the spurt in international economic effort, the international agencies have also increasingly entrusted the task of policy making to economists. And then suddenly has started a phase of heart searching. Have economists performed?

Several commissions and committees that have gone into work in the last decade both at the national and international level, in the developed and developing economies, not only to evaluate the working of the economic system in their own country but in the global context of under development, suggest the amount of suspicion that has been generated around the work done by economists. The reasons for doubt arise from differing phenomenon but the most important is continuance, in the later half of the 20th century, of poverty, deprivation, malnutrition, and economic indigence on a mass scale in a larger part of the globe, a large dividing gulf between rich and the poor nations, and a realization that a 7, 10, or 15 percent rate of growth is no guarantee to a proportional or even positive increase of 'Happiness' of all constituents of a nation. And this, unfortunately, is realized at a time when technological means to eradicate poverty and indigence at the global level exist, and also there is scope for a reorganized society to substantially reduce unhappiness arising from affluence.

Is not the title of the present paper part of this general pattern of skepticism and inner questioning? The need for such a questioning is further strengthened if we, nearer home, examine what has just happened when Indian population has voted for a new hope - largely new economic hope. What has happened in India is part of a general disenchantment with the manner in which economists have handled the economic affairs of this globe. Could not ways and means be devised in the past which could have prevented the present destitution of the majority of the population of this globe and the increasing unhappiness of the 'successful'

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minority? Could tools be not reoriented in anticipation of what was happening, economic-wise, to this globe? Or at least, can they be reoriented now?

Both economics and economic research, therefore, need to be redefined, if they ever have been well defined before, and this time the definition will need to flow from its purpose and its responsibility. Economic research need no more be contented with explaining economic behaviour and national and international economic phenomena in the past, in the present, and in the prospective future, but also concern itself with what subnational, national and international economic phenomena ought to be and how best these phenomena can be brought about in near or not so distant future. The patterns and modes of thinking of the economists and reorientation of the tools of economics will, therefore, need to be governed by this responsibility of the present to its future, of the grownups to be growing, and of the growing to the unborn. This responsibility will consist of not only accelerating the pace of economic development, which may be an important means to a desirable end, but in achieving the end itself.

This end in a society like ours is written in bold relief. It consists of eradicating of destitution and poverty from which a large majority of population in this country suffers, providing it with acceptable levels of food, nutrition, clothing, housing, health and education and at the same time maintaining a milieu in which these levels can not only be permanently ensured for an increasing population, but also there is an upgrading of these levels of economic minima consistent with human happiness as contained in absence of strains that have already emerged in some of the advanced societies and are emerging in others, not yet so advanced.

This concern with the future is of particular relevance to those who are at present either themselves engaged in the conduct of research or engaged in supervising and guiding such research. Because it is on the basis of their research,

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which will also in the process of research assimilate the existing fund of knowledge in their area of research, that policy decisions in near future and not so near future will be based. This awareness of the responsibility to the future is of great significance in the conduct of economic research, both today and tomorrow, if economists have to re-earn their lost trust as repositories and promoters of human happiness and welfare, and not of cells and atoms but of passions and volitions.

Economics as Social Workers

This is not to suggest that economics should cease to be a science or economists should become social workers initiated to work among the economically indigent in the name of God. What is required is that economists should considerably improve their understanding of this "universe of passions and volitions" at least nearer home so as to be able to so reorient their tools that they are able to provide, without much further delay, certain minimum standards of living to all that fall within the ambit of their decision making.

This will need to be done quickly since the time is short. The political impatience has already overtaken some - Bangladesh is an example of that impatience arising from economic neglect - and will in not so distant a future overtake others if their current economic neglect continues.

Economic research both at macro and micro level, has, therefore, a responsibility. Hitherto perhaps it has more helped build economists rather than the economy. Henceforth, it must engage itself with building up of the economy. In order to do this economic research must, as quickly as possible, become a handmaid of economic policy. It must, transform its character from a science engaged in fundamental research or its variants to a science increasingly engaged in the developmental effort of the humanity, at global national and sub-national level. It must, in particular, in under-developed economies like ours, reorient

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itself and share the character of R and D - Research and Development - in the same manner in which this term applies to physical sciences and research workshops attached to functioning or prospective industrial units. The economic research, in brief, must become problem and policy oriented.

It can be argued, with considerable ease I fear, that contribution to fundamental knowledge in the field of economics need not necessarily be in a vacua, in fact it cannot be. Therefore, the distinction between research perse and research for development is possibly vague. I agree that there is a degree of overlap between the two types of research. Also there is a two way traffic between the two categories of research which differ more in degree than in kind. Even research oriented at Development will, if it is original research, contribute to establishments of new methods, themselves in turn constituting addition to knowledge. My emphasis here is not that the economic research should be development oriented to the exclusion of knowledge oriented, but the establishment of new knowledge should flow from the establishment of new methods devised, on the basis of research, to meet a requirement of policy decision for a development oriented action. The difference then will be in the orientation of economic research for the future which, as elaborated further on, will call for extensive refining of tools of research.

Research for Development and Research for Knowledge

To establish by example that research for Development and research for knowledge are not necessarily coterminous - except over a very long run in which all of us will be dead - it will be useful to understand the differing character of economic development in two modern societies viz. U.K. and Japan. The former has undoubtedly some of the best economic talent and has made in the past, and also in the present sizable contribution to economic research and economic knowledge. Even today some of the best literature in economics, which has also

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claims to originality, originate from this country. This country, inspite of this vast base in economic research and economic talent, unfortunately annually experiences a rate of growth which can by no standards be called complimentary. On the other hand though Japan has no major claims in the area of contribution to knowledge in the field of economics, it has in the past many years experienced a rate of growth which is an envy of both developed and developing economies.

It is true that factors other than the orientation of economists and economic research matter, and matter much, in the development process of an economy, but there is reason to believe that policy makers in the field of economics have brought about considerable difference to the developmental experience of different countries. The economic revolutions that are credited to Ludwig Erhard in Germany and Keynes in the post depression era do suggest what powerful tool economic policy can be in any developmental process.

It has been an unfortunate fact of Indian economic research that most of its reference material has emanated from U.K. and more recently from U.S.A. Either because of the language barrier or for other reasons we have paid little attention to the reference or source material emanating from developed or developing countries nearer home. Possibly, we ourselves are the leaders in the area of development economics. But evidence for this is lacking if we judge our economic research interms of policy prescriptions it has provided in the past and the results achieved in terms of development and growth. Many neighbouring Asian countries are doing far better. In fact as far as growth rates are concerned. India appears to be around the bottom of the tally. These far higher rates of growth as compared to ours, it needs to be noted, are being achieved by fellow Asians in circumstances of economic under development similar to ours, and with human material no finer and technically better equipped than ours. It, therefore, needs to be examined as to what lessons can be drawn from the working of the economies of these neighbouring countries, in particular South Korea and Iran, and what

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relevance the policies adopted in these countries have for our economic research and policy making.

The reorientation of economic research thus calls for some specific obligations.

First, it involves a far greater understanding of patterns of human behaviour, social, economic, anthropological and others, of the population which constitutes the subject matter of policy decisions in the taking of which economic research is expected to help. The patterns of human behaviour, differ from area to area in spite of a basic likeness among homosapiens. These patterns of behaviour get intimately related to prevailing culture patterns which themselves result from several combined historical, geographical and other factors. It is because of this difference in patterns of behaviour that application of borrowed economic tools, unlike borrowed technology, lead to results different from those planned and desired. A clearer understanding alone will provide the necessary bench-mark for decision making.

More specifically we will have to pay a far greater attention to the development of survey techniques suited to our requirements than has been done hitherto. Most surveys which have been developed to assisting policy making have in some way been influenced by foreign know how which necessarily gave the conduct of surveys a bias towards survey methodologies developed on foreign soils. More indigenous and fruitful survey methodologies suited to our understanding of human behaviour patterns in India at different geographical and socio-economic levels need to be developed. This emphasis on survey research methodology is probably, at least in part, conditioned by my own experience in this field. On the one hand we have highly developed statistical tools for the development of survey designs and statistical processes which also make possible accurate estimates of errors. In other part, that is the conduct of field survey, errors

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generally of unknown proportions subsist. These are associated with various non-sampling phases and cannot be satisfactorily estimated. Measurement of memory errors, errors associated with informal against formal interviewing, the length of questionnaires, the wording of questions, specially in the context of poor households and informal enterprises/units, and the selection of interviewers and errors introduced at coding and tabulating stage are all, therefore, areas of economic and statistical research.

The next important obligation of economic research is a clearer and sharper understanding of the causation process. Here again probably, we have borrowed our understanding of the causation process from western economies. We, like good logicians, prepare our plans on the basis that our subjects of economic research and economic policy will behave like their western counterparts, and when they do not we feel frustrated. The important reason perhaps is that our subject is not standardized, and his behaviour patterns are not uniform. His reaction patterns to different economic and other stimuli are as diverse as the country itself geographically, culturally and in several other respects.

This diversity tells itself particularly in rural and urban sectors which call for dichotomous treatment of perhaps all economic matters in this country. These, in fact, are two non-competing or semi-competing economies interacting on each other and creating an interesting phenomenon for study by those engaged in economic research. Likewise, there are other sub-national entities like States and Districts which by creating economic and other barriers of different types call for a different economic evaluation of different policy tools. These are indigenous problems for which, fortunately, solutions will need to be found by our own research effort.

Need of Economic Planning

Economic planning is another area in which economic research must bear its responsibility. Here tasks are more complex. Planning follows the procedure of information gathering, collation and analysis of information gathered or developed, and on the basis of comprehension of the information so gathered, making of policy recommendations in order to achieve definable objectives. The research, thus, has in the first place to assist in the collection and documentation of data, past and current. This includes documentation of both library data and the field or survey data. In India arrangements and methodologies for both are lacking in quality. It is a banality that library data emerging from different sources on same or similar subjects differ. Their connotation is seldom clear to the user, and little attempt is made by those who assemble this data to be helpful to the user. Since at places it is our research personnel who are engaged in this task also, it is desirable that they learn to precisely define the terminology used by them, the sources of data employed, and the definition of terms as employed in the source materials. Since data put out by different agencies, both in Government and outside is firstly, available with much time lag and secondly, is not precise, the use of such data has several times resulted in misleading the policy makers. Here, there is an area of research in which both those engaged in building up the data and using it should be more precise and careful, and should appreciate and state the limitations of their work. I have already referred to the pitfalls in the survey data, and it will be useful if improved methods are developed by which it becomes possible to indicate the total errors in field data instead of sampling errors only.

Next stage in the planning effort involves collation and analysis of data. Here several modern and sophisticated statistical techniques have come to be employed. These techniques while lending precision to what is processed are unable to take into account the failings and infirmities of the primary data. It has been observed that final 'output' often comes to gain much more finality about it

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than the quality of 'input' warrants. More care, therefore, needs to be taken in using various statistical techniques in the processing and analysis of data.

This word of caution apart, what is required of economic research in the area of planning is to build up at the aggregative level, and also at several disaggregative geographical or sectoral levels, management matrices which while delimiting the field of operation at each stage enable some definable goals to be achieved by varying selected policy instruments. This system of planning which is expected to take into account various tangible and intangible objectives to be achieved and associate priorities to each of them is also often described as "System Management". "System Management" marks a radical departure from traditional patterns of organisation, being wider in its concerns and application than the more popular cost effectiveness studies.

This, therefore, is the method which will need to be increasingly used to meet the complexities that face the planners in the developing economies. Areas of welfare, welfare economics, and investment will need to be carefully defined and integrated into a national economic scheme. The needs of welfare and amounts involved may be partially dictated by the political leadership. But areas of welfare economics and investment will call for special research talent in the coming years. Combining economic growth with social justice is a difficult exercise and some mysteries in this area will need to be unrvalled.

Economic Growth and Social Justice

Take, for example, the area of nutrition. Should a nutrition plan involving x-crores of rupees be lanuched purely for welfare reasons, or should economic elements be also taken into account? Improved nutrition makes people look better and happier and this may be an end itself. But also, most likely, it improves their

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capacity to work and thus contributes to growth. Likewise, should we launch a major health programme simply for welfare reasons. Or should economic reasons such as reduction in many days lost due to morbidity be taken into account? In this country we still do not have figures which throw light on effects of health, nutrition or even educational programmes on productivity. Research workers can help the framers of policy in this and bring into correct focus the relevance of each area of investment in the overall pattern of national investment.

In the investment sector considerable work has been done abroad in the context of economies working somewhat differently than our own and having production and distribution patterns at a level far more sophisticated than prevailing in this country. But nearer home we need to do lot more work, not only in developing the overall matrix and its complex inter relations but also in developing techniques for a thorough evaluation of each individual segment of the system. Tools such as feasibility studies, performance budgeting and cost-benefit studies need to be increasingly employed and adopted to meet the requirements of the decision making processes in this country.

In short, the Plan should be suitably divided into welfare, intermediate, and investment sectors. It need not be, as at present, a general set of chapters written up by different working groups and tagged together after suitable scissoring to tally with the overall Plan size. Investment sector, in particular, should consist of a series of feasibility studies placed in order of priority after a careful evaluation of, among other things, alternative time streams of social benefits and costs of investment options. The Plan, perhaps, need not have a time dimension also and options should be kept open to substitute existing projects by new ones at any stage of its progress if it is established that new projects are likely to be more 'beneficial' than those already included in the Plan. But this substitution will need to be done within the overall matrix of development which ensures simultaneous

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determination of optimality by taking into account the multi dimensional interdependence including inter-sectoral, inter-regional and inter-temporal.

Economic Research and Business Economics

The last, but by no means the least, important area which economic research ought to assist is the area of operation of the Business Economist. The responsibilities of the business economists consist of market research including industrial and product research, development of feasibility studies for specific projects, environmental studies and forecasting, collection, collation and analysis of relevant economic information, economic and statistical analysis of competing firms, pricing problems of industry, analysis of distribution problems, analysis of investments and securities, analysis of supply problems, advice on foreign exchange matters, advice on trade and economic relations and analysis of services and production programmes. Here different techniques will need to be employed and those engaged in the conduct or teaching of research will need to assimilate these techniques in order to help the business economist make more informed decisions or by such economists themselves. In particular, "Programmed Planning" as a tool in business operation involving market research, study of political, legal and commercial controls having bearing on an economic activity, production feasibility, assessment of costs and production and marketing of products will need to be understood if not mastered.

Application of Mathematics to Economic Research

The list of requirements of economic research in order to meet the calls on it for the developmental processes of the economy, both at the macro and the micro level, will appear frightening if it is not understood that a large part of the total requirements will be met by a flexible control on a few basic tools of economic research. Included in these basic tools is the capacity to apply

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mathematics to economic problems, and to think and work coherently and consistently through this language. Einstein, I am told, once said that limits to his knowledge of physics arose from the limits to his knowledge of mathematics. Same may be true of economists of tomorrow, if it is not already true of those functioning today in the area of economics and economic research. The learning of this most effective tool in economic research should. Therefore, be made a basic requirement of advanced work in the area of economic research.

It is in the quantitative language of mathematics and statistics that most of future economic research will need to be done.

Tools and adoption or development of new ones is dictated by the present day complexities of economic phenomenon in which several objectives both of the State and of the individual or corporate entities have to be combined and made mutually consistent in a total framework or economic action. The economic machine which through the 'invisible hand' of Adam Smith brought into coordination the various economic activities largely carried out by individuals in pursuit of their self interests, narrow or enlightened, has ceased to function. The advantage of this machine was that while everybody went about maximizing personal gains by maximizing prices and profits, the final results were different from those of individual wills; the profits and prices were, in fact, minimized. The need of economic research in that era was largely limited to the better understanding of the working of the economic machine and job of the economist consisted of ensuring that the machine was kept smoothly working.

But disenchantment with the automatic functioning of the economic machine arose when it was discovered that in this machine there was no natural tendency to create a social order where plenty could be combined with stability, where man's basic needs are provided for, and where there are no fears of hunger, and economic destitution. With that realisation came the machine

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menders. Ideas of welfare maximization and full employment belong to this era of machine mending. The machine menders, such as Pigou, Ricardo, and Keynes, it can be said in retrospect, made a very useful contribution to the development of the economic system and contained to some extent the economic indigence that even now extends to a vast multitude but could have taken under its umbrella a much larger population.

In our times this process of machine mending has to be carried forward since as it stands today it is not fully suited to our requirements. If mending does not prove sufficient it may even have to be reconditioned. Except that it need not be discarded since already those economies which discarded it for some time are attempting to revive it thus proving that its functioning in some efficient form is almost essential to optimal decision making in our economy. How best this mending and reconditioning should be done in which conflicting interests of public and private good can be reconciled is a matter to which economists in the universities, in Government and in business, will have to apply.

To conclude, the basic task of economic research in a developing economy like ours is to assist in economic policy and decision making via economic advice. Economic advice is often defined as a product offering two services; knowledge and uncertainty. The task of economic research is to minimize the area of uncertainty and maximize that of knowledge. This, it ought to do, by a better collection and comprehension of library and field data and use of improved techniques of analysis, interpretation and prediction. Whenever and wherever existing tools and techniques prove inadequate, it ought to make a contribution to method. This contribution alone will or should entitle one to a Doctorate in Philosophy.

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