An approach toward methodological appraisal of social research

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Abstract

The courses in research methodology seem to have been driven by the widely-held notion that carefully drawn methodological principles would tell us how to do research scientifically. The logical sequence thus turns out to be from a set of prescriptive principles to the practice that is supposed to follow those principles. In this paper, we take the opposite route. We argue that there is enough evidence to show that actual practice of research in social sciences is too rich in diversity and innovativeness to be disciplined by a few prescriptive norms. We begin with the invocation of the diversity of practices and a rough classification of different types of research inquiries, each of which is ostensibly driven by a specific motivation. Research inquiries are not always explanatory, or, as economists tend to suggest, predictive. Apart from explanation and prediction there are several other motivations that drive social research. A major area, for example, deals with the normative issues involved in assessing states of affairs or changes therein. We discuss how an explanatory kind of research question is dealt with within the positivist-empiricist framework. In particular, the respective roles of theory (or explanatory framework), data and method are discussed. We then raise a few issues about normative-evaluative kind of research, and finally the post-positivist approaches in social research including economic are discussed.

Keywords: Positivism, falsification, hypothetico-deductive, methodological pluralism, evaluative research.

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1. Introduction

The courses in research methodology seem to have been driven by the widely-held notion that carefully drawn methodological principles would tell us how to do research scientifically (or social-scientifically?). And once they are drawn, the next obvious step would be to appraise an actual piece of research or a research programme in terms of those principles. In other words, the logical sequence turns out to be from a set of prescriptive principles to the practice that is supposed to follow those principles. In economics, for example, philosophers of science were believed to hold the key to how to do ‘economic science’, even though several groups outside the mainstream economics (eg. Marxists, Austrians, Institutionalists) have had their shared methodological approaches. What has been common among the practitioners of economic research – both within and outside of the mainstream – is that both sides have viewed methodology as offering a set of prescriptions on what constitutes legitimate practice. In this view, the common concern of methodological discussions is essentially normative, and is based on philosophers’ attempt to justify knowledge claims.

In this paper, we take the opposite route. We argue that there is enough evidence to show that actual practice of research in social sciences is too rich in diversity and innovativeness to be disciplined by a few prescriptive norms. Therefore, in Section 2 we begin with the invocation of the diversity of practices and a rough classification of different types of research inquiries, each of which is ostensibly driven by a specific motivation. Research inquiries are not always explanatory, or, as economists tend to suggest, predictive. Apart from explanation and prediction there are several other motivations that drive social research. A major area, for example, deals with the normative issues involved in assessing states of affairs or changes therein. For example, an issue like how development of a country or a region is to be assessed is evaluative in nature. Of course, the brief account of different types of social research presented here is far from exhaustive. In Section
3 we discuss how an explanatory kind of research question is dealt with within the positivist-empiricist framework. In particular, the respective roles of theory (or explanatory framework), data and method are discussed. In Section 4, we raise a few issues about normative-evaluative kind of research. In section 5, we briefly discuss the post-positivist approaches in social research, and in Section 6 we conclude.

2. From practice to methodology
The commonplace view about social research is overwhelmingly explanation-oriented where the central question is ‘why’. Why is the labour force participation rate of women low in India? Why are some states better at human development than others? Why have so many farmers committed suicide in India in the recent past? Answers to these questions take a causal form, even though the method usually deployed to establish a causal explanation can accomplish the job only imperfectly. Nevertheless, most policy discussions are based on some understanding of the causes and their effects on various outcomes. In other words, the essential nature of inquiry here is explanatory. Inquiries of this kind end up indicating or ‘establishing’ some causal connections between choices or actions of agents (individuals, groups, governments, corporations, etc.) and outcomes. However, the self-conscious practitioners of statistical or econometric techniques know it rather well that at best their techniques establish some association between variables, rather than a causal connection. One requires a big leap of faith to claim an associational observation between, say, x and y, as a causal one, even though certain econometric techniques, such as the Granger causality test, claim to establish causal connections between variables. Thus, we might self-consciously seek to establish some association between entities, in which case the nature of inquiry would be associational or relational, rather than explanatory.

Besides explanation and finding association, one can identify several other motivations as well which drive research inquiries. When a study is designed primarily to describe what is going on or what exists, without entering into the analysis of underlying relationships or causal connections that are not so apparent, it is
A question such as ‘how has GDP of India grown in the post-reform period’ falls in this category. To answer this question one has to describe the pattern of growth in India’s GDP between, say, 1991 and the present. However, there is no such thing as ‘pure description’, as description involves conscious methodological choice\(^3\). As in this apparently simple question, one has to decide on whether the average annual rate of growth or the trend rate of growth should be calculated, whether the period should be divided into sub-periods and the average or the trend growth rates in the sub-periods should be noted, and so on.

Different underlying motivations seem to dominate different disciplines. In economics, for instance, prediction is considered to be the most important motivation behind theoretical and empirical inquiry. In mainstream economics, the standard methodological route is to set up a model of behavior of agents (individuals, firms, etc.). Starting from a set of axioms about behaviour of the agents, conclusions are derived using deductive mathematical logic. The methodological approach is therefore called hypothetico-deductive. Such models based on deductive logic are expected to predict future outcome. This dominant view was made explicit by Milton Friedman in his widely known paper ‘The Methodology of Positive Economics’ (Friedman, 1953). Friedman argued that the assumptions made by economists while modeling individual behaviour should be judged ‘by seeing whether the theory works, which means whether it yields sufficiently accurate predictions’, not by the ‘realism’ of the assumptions. Amartya Sen, however, holds a different view:

Prediction is not the only exercise with which economics is concerned. Prescription has always been one of the major activities in economics, and it is natural that this should have been the case. Even the origin of the subject of political economy, of which economics is the modern version, was clearly related to the need for advice on what is to be done on economic matters. Any prescriptive activity must, of course, go well beyond pure prediction, because no

\(^3\) Sen (1980) explains why a ‘good’ description may not be a precisely true description.
prescription can be made without evaluation and an assessment of the good and the bad (Sen, 1986, p 3).

Thus, ‘evaluation and an assessment of the good and the bad’ gives rise to yet another altogether different kind of inquiry, which is evaluative. For an evaluative inquiry one applies certain normative criteria to judge states of affairs. For example, a question such as ‘is gender inequality more in country A than in country B’ apparently falls in the descriptive category. But on closer scrutiny, it becomes clear that there is no obvious way of assessing gender inequality with a comparative perspective. Even if one restricts oneself to this question, ignoring such related questions as why gender inequality is more in one country than in another, it turns out to be non-trivial as explicit value judgments with moral philosophic underpinnings are deeply involved. Amartya Sen often makes a distinction between evaluative exercises and descriptive-analytic or predictive-prescriptive exercises, as in the lines quoted above, and emphatically points out that the motivation behind the evaluative type of inquiry is no less important than that behind others. The entire theoretical literature on measurement of inequality, poverty and human development falls in this category.

All these types of research inquiries briefly described here roughly fall in the paradigm which can be roughly called positivist. In the next section we elaborate on the notion of paradigm and the epistemology of positivism.

3. Positivist-empiricist practice

To establish any connection between specific ‘causes’ and ‘effects’ there is no simple formula. Three basic ingredients of social research are (i) some ideas about how things are or how change takes place, (ii) data or observations on ‘facts’, and (iii) methods that integrate ideas and observations. By method we mean a set of tools or techniques informed by an approach which is applied in a research inquiry. But methodology is concerned

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4. This is not to be confused with programme evaluation or impact assessment.
with the framework within which particular methods are appraised. In other words methodology deals with the broader question of ‘how we know what we know’ and is somewhat close in meaning to what we understand as epistemology. Ideas are obtained from various theories. They may often look like commonsense. But if they are part of a theoretical framework one can expect logical coherence in the ideas, which commonsense does not guarantee.

What is theory? Before we come up with an imprecise answer to this question, it would be helpful if we accept that theory can be defined only within a paradigm. Roughly speaking, a paradigm is a combination of a set of underlying beliefs about the ways things are and specific ways of inquiring about how things are, how they change, how they are connected with or influenced by each other, and so on. In other words, a paradigm can be identified with specific ontological and epistemological positions. For many of us who work in what is loosely called ‘development research’, a kind of positivism seems to be the underlying paradigm. In this version of positivism the core belief is that reality is out there and by gathering ‘facts’ it is possible to find out what is happening in reality. The researcher is assumed to stand apart from the observed and produce objective knowledge. How does she go about it? First, the researcher identifies separate aspects of reality and expresses them as ‘variables’. Then she goes on examining the relationships between variables. This involves both observation and reasoning based on arguments acceptable within the paradigm. Within the positivist paradigm, a theory is expected to answer our ‘how’ and ‘why’ questions in the most generalized way with a coherent logical structure. Generalisability is at the core of theoretical statements.

Someone with an empirical bend of mind and relying less on theory for illumination often tends to say ‘facts speak for themselves’. As a matter of fact, facts hardly speak for themselves. One has to sort out relevant from irrelevant facts at the outset. Without some prior idea about the nature of the phenomena, without some propositions, assumptions etc, there is no way this can be meaningfully done, according to a positivist. Deciding that observation X or Y is relevant marks the start of a theory. In this paradigm, theory means a logically valid chain of
reasoning starting from certain premises called postulates. Postulates are taken as axiomatically given and contain certain terms that are representatives of persons, organizations, things, actions, states etc. found in the world of experience. A meaningful analysis presupposes that the terms are unambiguously defined.

In this positivist-empiricist paradigm hypothesis testing seems to take the pride of place. It is a commonly held view that any proposed research in social science must specify at the outset the hypotheses to be tested. Admittedly, certain types of social research do require the use of hypotheses. They can be useful in helping to find answers to ‘why’ questions and therefore are developed at the outset to set the direction. However, precise specification of the hypotheses is neither necessary nor appropriate in many cases. In particular, when explanation is expected to come out in the form of a complex web of interconnections and mutual influences, a cut-and-dried kind of hypothesis testing may not give a better insight into a phenomenon. Hypotheses should ideally be derived from a theory of some kind. Hypotheses that are simply based on common sense or intuition, without making any reference to the existing state of knowledge, rarely make significant contributions to the development of knowledge.

Most mainstream economists believe that their methodology is positivist. The philosopher who has had the greatest influence on the methodology of economics is Karl Popper, as evident from the frequent invocation of Popper by economic methodologists such as Mark Blaug (1992). Popper’s philosophy even influenced a major introductory textbook – Richard Lipsey’s *An Introduction to Positive Economics*. Popper’s philosophy of ‘scientific knowledge’ is concerned with what he calls ‘the problem of demarcation’, i.e. the problem of distinguishing science from non-science. Popper introduces falsification as the criterion to be applied for demarcation. A statement is in principle falsifiable if it is logically inconsistent with some finite set of true or false observation reports. Popper himself gives an example of a scientific statement: ‘All swans are white’. This is a falsifiable statement since the observation of a non-white swan would establish its falsity. There is an asymmetry between verifiability and falsifiability. A universal
statement concerning an unbound domain, such as ‘all swans are white’, may be falsifiable but not verifiable. For example, the observation ‘this swan is black’ falsifies the statement ‘all swans are white’. To verify the statement we need to observe all possible swans, but the set of all swans is unbounded as it includes, inter alia, swans yet to be born. In other words, it is not possible to verify any truly universal statement, but one can falsify it or verify its negation (Hausman 1992).

 Ironically, economists do not seem to practice what they preach. Hausman criticizes ‘the methodological schizophrenia that is characteristic of contemporary economics, whereby methodological doctrine and practice regularly contradict one another’. We take a different standpoint here which fundamentally disagrees with the view that economists should stick to falsificationism as the only criterion to assess knowledge claims in economics. In what follows, we present a glimpse of the variety of theoretical ideas and the corresponding methodological approaches that scholars have actually adopted in social sciences in general and in certain branches of economics in particular.

4. Explanatory framework and varieties of theory: Structure versus agency

A broad classification of theoretical approaches in social sciences could be made in terms of the basic unit of analysis. Traditionally, the dominant view in social science happened to be that of understanding the functioning of the social system. From Adam Smith’s *An Inquiry into the Nature and Causes of the Wealth of Nations* to Max Weber’s *The Protestant Ethic and the Spirit of Capitalism*, most of the classics in social sciences focused on some kind of social (or economic) system. However, much of contemporary social research focuses on explaining individual behaviour. With the development of quantitative methods of research, dependence on individual level data has increased significantly. If one still feels that the functioning of the system should remain the central problem for research inquiry, how does one go about explaining the system? From both ontological and epistemological points of view there can be two broad ways of explaining the system – systemic (or structuralist) and agency-
A structuralist mode of explanation generally rejects the view that the social, economic or political structure can be explained entirely as the aggregate of the actions of individual agents. The most well-known statement representative of an extreme form of structuralist explanation is perhaps contained in Marx’s Preface to *A Contribution to the Critique of Political Economy*.

In the social production of their life, men enter into definite relations that are indispensable and independent of their will, relations of production which correspond to a definite stage of development of their material productive forces. The sum total of these relations of production constitutes the economic structure of society, the real foundation, on which rises a legal and political superstructure and to which correspond definite forms of social consciousness. The mode of production of material life conditions the social, political and intellectual life process in general. It is not the consciousness of men that determines their being, but, on the contrary, their social being that determines their consciousness.

Here individuals seem to have no ‘agency’ role to play; relations of production corresponding to a definite stage of development of material productive forces determine what they do. Marx continues in the Preface to further suggest that it is the interplay of the forces and relations of production that brings about social transformation – transition from one mode of production to another.

In a similar vein, more recently, Terry Byres (1987) begins an article on India’s development planning as follows:

This is an essay on development planning in post-1947 India, written from a Marxist political economy perspective. It is not an essay about the ‘failure of planning in India’. Nor is its theme Indian planning’s achievements. It is rather a consideration of those contradictions that were inherent in Indian development planning at its inception, which centred

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5. For a comprehensive and lucid discussion on this see Hollis (2000).
on the state and class: contradictions which deepened as planning proceeded; and which continue to demand attention despite planning’s apparent demise.

A full assessment of planning in India, Byres demands, must be an historical exercise – in an analytical political economy sense, not necessarily in a chronological sense. In the analytical political economy sense it must be historical, according to him, in three broad ways: (1) Planning must be located with respect to the ‘laws of motion’ or ‘tendencies’ which mediate the Indian social formation, and their attendant contradictions, especially as these relate to accumulation and the sources of accumulation; (2) the instrumentality of planning must be judged in relation to the possibility of transition from economic backwardness to a dominant capitalist mode of production; (3) a long time horizon, sufficient to talk about the structural, the epochal, the trend, not the ‘moment’ or the conjunctural. The methodological agenda that Byres charts out are clearly very different from the one we introduced at the beginning, and do not fall into the familiar theory-method-data kind of positivist-empiricist category.

To take another example roughly in the same tradition as Byres’, the key analytical concept that runs through the book by Chandrasekhar and Ghosh (2002) is ‘contradiction’, which has been extensively deployed to analyse the evolution of the Indian economy from the planned phase through ‘neoliberal reform’, using plenty of empirical material. Three mutually reinforcing and interrelated contradictions, which arose out of the various roles that the state had to play, led to the development impasse of the late 1960s and the 1970s, according to Chandrasekhar and Ghosh. The chapter on ‘the political economy of reform’ says in a nutshell that the ‘internal contradictions’ of the earlier policy regime generated increasing support within the powerful and affluent sections of society for changing this regime in the manner desired by the IMF and the World Bank.

An empirically oriented economist is likely to find this series of contradictions unpersuasive since it cannot be demonstrated easily by appealing to relevant empirical evidence that it is indeed ‘internal contradictions’ that explain the entire evolution of the
Indian economy in the past decades. No amount of data is enough to refute the hypothesis of internal contradiction. Chandrasekhar and Ghosh have used a wide range of macroeconomic data to present an excellent narrative of the experience of economic reforms in India. But to what extent their data support the ubiquity of ‘internal contradictions’ remains a question.

If one goes through the huge literature on agrarian reform, one is struck by the variety of methodological and epistemological perspectives – mostly implicit but occasionally explicitly articulated – that the scholars have taken. Sometimes they trigger curious sort of exchanges in seminars and conferences. The paper by Griffin, Khan and Ickowitz (2002) presented in the International Conference on Agrarian Relations and Rural Development in Less-Developed Countries in Kolkata was labelled as ‘neoclassical’ by several commentators to which Griffin’s reply was:

Several participants have described our analysis as ‘neoclassical’ . . . While labels do not matter terribly, it is slightly puzzling why anyone would think our analysis is neoclassical, given the emphasis we place on non-market clearing, uncompetitive behaviour, multifaceted labour market discrimination, organized interest groups of landowners, the exercise of political power and so on. The American variety of neoclassical economist would disown us!

Clearly, between Byres’ kind of pure Marxist political economy perspective and what Griffin’s commentators call ‘neoclassical’ there could be a variety of perspectives in between. It appears that, while Byres’ perspective is less likely to be contaminated by other perspectives, many would not mind going a step down the system level for more illumination.

One significant attempt to capture the long-term development in the capitalist world system in, needless to say, systemic terms, is Amiya Kumar Bagchi’s Perilous Passage (Bagchi, 2005). He traces out when and how the divergence between countries occurred. Instead of focusing exclusively on divergences in economic prosperity of the nations he looks at the living standard of people from the human development perspective. With the help of demographic and anthropometric data he shows that divergence
did take place from the Industrial Revolution, although it is not a case of steady divergence throughout the period till date. From the methodological point of view the most significant aspect of the book is its narrative style, eschewing either a rigid form of determinism that is characteristic of Marx’s Preface, or an empiricism that comes out of positivist thinking. Even though the underlying theme is ‘capitalist world system’, his narrative style seems to be consistent with any perspective that takes as analytical entry point any level below the capitalist world system (for example, evolution of institutions or behaviour of corporations).

In sum, what we have tried to illustrate here is the variety of practices which do not subscribe to the standard positivist-empiricist method that combines theory, data and hypothesis-testing. And second, it is impossible to put different theoretical approaches in water-tight paradigmatic compartments.

5. Contested terrain in evaluative research:
Composite index as an illustrative example

The process of development is essentially qualitative in nature. However, in order to know how a country or a sub-region in a country is doing vis-à-vis others we need to identify certain quantifiable aspects of development. While the expansion of a country’s productive capacity may be considered a necessary condition for development in the long run, it is not sufficient to ensure expansion of the real freedom of people to do what people have reason to value. Development is conceptualized as freedom, and freedom is multi-dimensional. Therefore any measure of development has to be multi-dimensional. Each dimension is quantitatively represented by an indicator, and the indicators are often put together through certain aggregator to construct a composite index of development.

Underlying any composite measure is some assumption regarding how various dimensions of development (or interchangeably ‘well-being’, ‘quality of life’, ‘human development’) are related to the overall index. There are mainly two ways of establishing such a relationship. One is the so-called data-driven method to derive a set of weights. Starting from observed data on the variables to be
included in the measure of well-being, a principal component analysis is carried out, and the first principal component, if it explains a significant proportion of the total variability of the variables, is taken to be a composite index of well-being since the first principal component is a linear combination of the original variables. This method does not define any well-being function explicitly. The alternative approach, what we may call the ‘ethical approach’, starts from an explicit well-being function. We discuss a few plausible ethical positions that would give rise to different composite indices. Since the most widely known composite index is the Human Development Index (HDI), popularized by UNDP, many of the issues that we discuss naturally draw heavily on the conceptual background of HDI and the lessons one learns from its evolution and application over the past quarter of a century.

Essentially there are three steps in construction of a multi-dimensional measure of development. We briefly describe the steps here and illustrate them with the example of HDI.

**Identification**

First, we need to identify the dimensions that we propose to include in the multi-dimensional measure. The dimensions are selected on the basis of the conceptual framework that underlies the measure. The HDI, for example, measures human development, which is conceptualized as expansion of people’s choices. Following this conceptualization UNDP settles on three dimensions of human development, viz. a long and healthy life, access to knowledge, and a decent standard of living. The corresponding indicators are life expectancy at birth, a combination of mean years of schooling and expected years of schooling, and Gross National Income (GNI) per capita at purchasing power parity dollar (PPP).

It is obvious that the conceptual richness of human development cannot be fully captured by these three dimensions. As a matter of fact, the chief architects of HDI, Amartya Sen and Mahbub ul Haq, both have written explicitly about the crudeness of the index. There are many variables of relevance to human development that are not included in the HDI, such as civil and political rights,
nutritional status, autonomy, mobility, freedom from crime and violence, and so on. Some of them could be included. But the basic idea was to keep the index simple and manageable. One must acknowledge the dilemma at this point. Should we aspire for a measure that is ‘complete’, scientifically perfect, logically correct, and so on? Or should we try to find a measure that may not be perfect but effective for advocacy and policy-making? HDI is believed to strike a balance between the two.

The income component of HDI has been criticized on the following ground. The conceptual foundation of HDI is based on the concepts of capabilities and functionings. A functioning refers to the state of being of a person or how the person is doing. In this sense, income is not a functioning. It may be instrumental in achieving some functioning, but it is the functioning which is valued, or a person reason to value. Income has only ‘derivative importance’ rather than any intrinsic importance. The rationale for including income, however, is that it acts as a close feasible proxy for all choices other than those captured by longevity and knowledge indicators. The HDI is also criticized for mixing stock variables with flow variables. Life expectancy or expected years of schooling, for example, are stock variables in the sense that they refer to some point in time, not duration of time. We do not say ‘life expectancy per year or per month’. But income is a flow variable. It refers to duration, as income is expressed as ‘income per year’ or ‘per month’, for example.

**Valuation**

Once the dimensions are settled on and the component indicators are identified, then the next question is whether the indicator values reflect our ethical intuition about the relative worth of different values. For example, if we interpret income as an indicator of real standard of living, then should we consider a country with a per capita income of 80,000 dollars as offering 80 times the living standard offered by another country whose per capita income is 1000 dollars? We may not. It is a value judgment based on our understanding of the ethical worth of certain indicator...
value. The HDI treats the income component differently from the other components. Instead of taking the real per capita income in its face value, it takes the logarithm of per capita income. This is a valuational exercise. In other words, the authors of the Human Development Report think that as a country’s per capita income rises, it improves people’s living standard, but at a diminishing rate. Without this logarithmic transformation, for high income countries the value of the income component would be so large that the value of the composite index would be largely dominated by the income component, which would go against the very purpose of constructing an alternative index.

**Aggregation**

The final step is aggregation. The multiple dimensions produce a vector of numbers. We cannot say whether country A ranks higher than country B in terms of human development achievement, if, for example, the first indicator is higher in A than in B and the value of the second indicator is higher in B than in A. We can compare A with B only in the less likely situations where all the indicators in A show higher values that corresponding values in B. This is the case of ‘vector dominance’. But in most cases of actual comparisons we do not find vector dominance. Therefore we need to combine the component indicators to construct a scalar number, which is called the composite index.

Two broad types of aggregators are *cardinal* and *ordinal*. HDI, for example, follows cardinal aggregation procedure in which geometric mean of the component indicators (after they are normalized) is taken as the composite index. An example of ordinal aggregation is the method proposed by Borda in the context of voting.\(^7\)

From 2010 UNDP radically changed its method of aggregation – from arithmetic mean to geometric mean. HDI first transforms the indicators into unit-free numbers and then takes the geometric mean of the three transformed variables. One implication of the

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\(^7\). For an application of the Borda method of ordinal aggregation see Chakraborty and Mishra (2003).
arithmetic mean is that the three components are treated as perfect substitutes. In other words, low longevity and high per capita income is considered as good as high longevity and low per capita. Low achievement in one dimension is assumed to be perfectly compensated by high achievement in another dimension. Although UNDP had been using the arithmetic mean for almost two decades on the ground of ease of comprehension by policy makers, it was always felt that perfect substitutability between dimensions was not a very reasonable assumption. Hence the realization that the geometric mean would make better sense. The geometric mean has the following implication. If the indicator that has the lowest value makes an improvement by one point, its contribution to the composite index would be more than the same one point improvement in the indicator that has a higher value.

In any composite index, we should know what weights are attached to the component dimensions, to properly judge if it has got the balance right. The weight in any given dimension can be defined as the index’s first partial derivative (“slope”) with respect to that dimension. Since the component dimensions have been re-scaled so that they lie in the 0-1 interval, what really matters is the relative weights of its component dimensions. In other words, we need to know the assumed trade-offs, as given by the HDI’s marginal rate of substitution (MRS), i.e., how much of one desired component of the HDI must be given up for an extra unit of another component, keeping the overall index constant. If a policy or economic change entails that one of the positively-valued dimensions increases at the expense of another dimension, then it is the MRS that tells us whether human development is deemed to have risen or fallen. Martin Ravallion (2010) has pointed out that the implicit trade-offs often go contrary to what our value judgement would suggest. On a priori grounds it is unclear what effect relaxing perfect substitutability between the transformed indicators would have on the trade-offs in the core dimensions. Whether the MRS increases or decreases essentially depends on the data.

The HDI’s new aggregation method based on the geometric mean hides partial success amongst countries doing poorly in just one dimension. As dimension X approaches X_{min} we see that HDI
approaches zero no matter what value is taken by the other dimensions. Consider, for example, Zimbabwe, which has the lowest HDI of 0.14 in 2010 – and it is the lowest by far, at about 60% of the next lowest. Yet this is due to one component that currently scores very low, namely income. Zimbabwe’s income index value of 0.01 is the lowest of any country and by a wide margin (60% of the next lowest value). However, the schooling index value is 0.52 and the longevity index value is 0.43 – both well above the bottom. Indeed, there are 56 countries with a lower schooling index than Zimbabwe’s, yet this relative success is hidden by the HDI’s new aggregation formula, given its multiplicative form. Using the arithmetic mean instead (with other data unchanged), Zimbabwe still has a low HDI, but it ranks higher than six countries.

**Reckoning change**

The following figures are taken from *India Human Development Report 2011* presented by the Planning Commission of India. Between 1999 and 2007, the HDI value in Bihar increased by 0.075 from 0.292, and in Kerala it increased by 0.113 starting from 0.677. Clearly Kerala made greater *absolute* improvement. However, if we compared the percentage changes in HDI in the two states and with the national average as well, which the *Report* did, the increase in Bihar (25.7%) turned out to be greater than the increase in the national average (20.7%). On the other hand, Kerala’s HDI improved by 16.7%, which was below the national average of 20.7%. What kind of meaning can we attach to these percentages? Do they mean that Bihar’s improvement is *more valuable* than Kerala’s? Do they mean that Bihar has *performed better* than Kerala? The two questions are distinctly different and they direct us to two very different ways of measuring improvement. If one holds the view that the marginal human development diminishes as human development improves, then any improvement from a lower level is considered to be more valuable than similar improvement from a higher level. In this view Bihar’s improvement would be judged *more valuable* than Kerala’s. However, if one is to judge how commendable the performances of the two states are, it is rather unlikely that a reasonable person
would accept the view that Bihar had performed better than Kerala. Kerala clearly made more commendable progress as it managed to improve its HDI by 0.113 from an already high 0.677, whereas Bihar’s HDI increased by only 0.075 starting from a low 0.292. Moreover, in this example, the gap between the HDI values in the two states in fact increased rather than decreased. Therefore, just by looking at the relatively higher percentage changes in the HDI values in low HDI states one cannot logically conclude that the low HDI states made better progress than others and ‘there is convergence taking place in HDI across states’.

What we have presented here shows the contested nature of evaluative research. Each step of constructing a composite index of development is fraught with a range of conceptual and technical issues, and there is no magic formula that would resolve the ‘problems’. However, there is nothing defeatist about the multiplicity of possibilities and not having any way to privilege one over the others. In certain social science disciplines like economics pluralism as a value position does not seem to be the most sought after.

6. Pluralism and post-positivist approaches

Till this point we have taken the position that there is an underlying reality which research can find out more and more about. With effort and technique we can achieve greater precision in our understanding. However, an alternative belief could be that different accounts or pictures of reality are simultaneously possible based on different perspectives and interests. ‘Qualitative’ research methods are usually associated with this *constructivist* or *interpretive* view. The researcher tries to bring out and record different accounts from different viewpoints and then construct what appears to be a complex story. But the problem with this view is that one does not have a sure way of deciding on what the best story among several possibilities is.

In some areas of social research, the qualitative-quantitative distinction has led to protracted arguments with the proponents of

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8. For further details see Chakraborty (2011).
each arguing the superiority of their kind of method over the other. The quantitative side argues that it is ‘rigorous’, ‘hard’, ‘scientific’, and so on. The qualitative approach, as claimed by its proponents, is ‘superior’ because it is ‘sensitive’, ‘nuanced’, ‘contextual’, and so on. Both qualitative and quantitative research rest on rich and varied traditions that come from multiple disciplines and both have been employed to address almost any research topic one can think of. There is no reason to give primacy to one over the other. Different methods are required to address different problems, and a combination of techniques may yield greater insight than either one of them used in isolation. However, it must not be taken for granted that a combination of qualitative and quantitative methods should always be considered superior to either of them. Two things have to be separated in this context. As far as types of data are concerned, there is little difference between qualitative and quantitative data. All qualitative data can be coded and expressed in numeric form. Even if one retains qualitative data in non-numeric form, and uses it for additional insight besides what is known from quantitative information, the methodological approach is still positivist-empiricist (Chakraborty, 1996).

The difference perhaps lies in the assumptions about reality and about the way one should acquire knowledge about reality. For instance, many researchers who follow the qualitative approach believe that the best way to understand any phenomenon is to view it in its context. Some in the qualitative tradition believe that the researcher cannot stand apart from the process and produce objective knowledge. Thus the two approaches clearly differ in terms of ontological assumptions and epistemological positions. Ignoring the deeper issues of this kind, a blanket advocacy of the so-called ‘mixed method’ (apparently some ad-hoc combination of qualitative and quantitative methods) smacks of superficiality.

A wide range of scholars now advocate ‘methodological pluralism’. We believe, the primary purpose of our methodological discussion is to enhance our understanding of what social science is all about and, by so doing, to improve it. The critical appraisal of methodological approaches plays an essential role in methodological pluralism. Criticism is not to be undertaken for the purpose of correcting the deviations from the so-called ideal, for
the ideal in the absolute sense does not exist at all. Appraisal of scholarly practice is therefore a complex process of questioning and interpreting that cannot be based on any general so-called ‘scientific method’.

7. Conclusion

In this paper, we have argued that research methodology in social science must not be viewed as prescribing a set of rules about how to do social research. We have illustrated with examples from the literature the variety of practices which can hardly be seen as following a narrow set of normative criteria. Judging by the impact that various scholars have in the research community with their research output, it seems that methodological appraisal as a scholarly enterprise can meaningfully contribute to social research if it draws on the richness of actual practice, on how scholars deploy their methodological strategies to persuade the members of their community. Moving away from a meta-theoretic perspective such as positivism is likely to facilitate better communication among practitioners in social sciences.

References:


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<tr>
<th></th>
<th>Title</th>
<th>Author</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Keynes, Kaldor and Development Economics</td>
<td>Amiya Kumar Bagchi</td>
<td>July 2004</td>
</tr>
<tr>
<td>2.</td>
<td>Epar Ganga Opar Ganga - A creative statement on displacement and violence</td>
<td>Subhoranjan Dasgupta</td>
<td>July 2004</td>
</tr>
<tr>
<td>4.</td>
<td>Gender, History and the Recovery of Knowledge with Information and Communication Technologies: Reconfiguring the future of our past</td>
<td>Bamita Bagchi</td>
<td>July 2004</td>
</tr>
<tr>
<td>5.</td>
<td>Kerala’s Changing Development Narratives</td>
<td>Achin Chakraborty</td>
<td>October 2004</td>
</tr>
<tr>
<td>6.</td>
<td>The Development Centrifuge: A Retrospect in Search of a Theory and a Centre</td>
<td>Pinaki Chakraborti</td>
<td>February 2005</td>
</tr>
<tr>
<td>8.</td>
<td>The Construction of the Hindu Identity in Medieval Western Bengal? The Role of Popular Cults</td>
<td>Jawhar Sircar</td>
<td>July 2005</td>
</tr>
<tr>
<td>10.</td>
<td>China India Russia: Moving Out of Backwardness, or, Cunning Passages of History</td>
<td>Amiya Kumar Bagchi</td>
<td>May 2007</td>
</tr>
</tbody>
</table>


18. *Female Work Participation and Gender Differential in Earning in West Bengal* by Indrani Chakraborty and Achin Chakraborty, April 2009.


37. *Medical Education and Emergence of Women Medics in Colonial Bengal* by Sujata Mukherjee August 2012.


42. Living Arrangement and Capability Deprivation of the Disabled in India by Achin Chakraborty and Subrata Mukherjee, November 2013.


44. Exploring Post-Sterilization Regret in an Underdeveloped Region of Rural West Bengal by Saswata Ghosh, April 2014.


50. Purchasing Managers’ Indices and Quarterly GDP Change Forecast: An Exploratory Note Based on Indian Data by Dipankor Coondoo and Sangeeta Das, January 2016.


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<th>No.</th>
<th>Title</th>
<th>Author(s)</th>
<th>Publisher and Location</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td><em>Maladies, Preventives and Curatives: Debates in public health in India</em></td>
<td>Amiya Kumar Bagchi and Krishna Soman (editors)</td>
<td>Tulika, New Delhi</td>
<td>2005</td>
</tr>
<tr>
<td>6</td>
<td><em>Perilous Passage: Mankind and the Global Ascendancy of Capital</em></td>
<td>Amiya Kumar Bagchi, Rowman and Littlefield Lanham, Maryland, USA</td>
<td>2005</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td><em>Globalisation, Industrial Restructuring, and Labour Standards: Where India meets the Global</em></td>
<td>Debdas Banerjee</td>
<td>Sage Publication</td>
<td>2005</td>
</tr>
<tr>
<td>8</td>
<td>Translation with an introduction of Rokeya S. Hossain: <em>Sultana’s Dream and Padmarag</em></td>
<td>Barnita Bagchi</td>
<td>Penguin Modern Classics</td>
<td>2005</td>
</tr>
<tr>
<td>10</td>
<td><em>Capture and Exclude: Developing Economies and the Poor in Global Finance</em></td>
<td>Amiya Kumar Bagchi and Gary Dymski (editors)</td>
<td>Tulika, New Delhi</td>
<td>2007</td>
</tr>
<tr>
<td>12</td>
<td><em>Eastern India in the Late Nineteenth Century, Part I: 1860s-1870s</em></td>
<td>Amiya Kumar Bagchi and Arun Bandopadhyay (editors)</td>
<td>Manohar and Indian Council of Historical Research, New Delhi</td>
<td>2009</td>
</tr>
<tr>
<td>13</td>
<td><em>Indian Railway Acts and Rules 1849-1895: Railway Construction in India: Selected Documents (1832-1900), Vol. IV</em></td>
<td>Bhubanes Misra (editor); Amiya Kumar Bagchi (General Editor)</td>
<td>Indian Council of Historical Research, New Delhi</td>
<td>2009</td>
</tr>
<tr>
<td>14</td>
<td><em>Colonialism and Indian Economy</em></td>
<td>Amiya Kumar Bagchi</td>
<td>New Delhi, Oxford University Press</td>
<td>2010</td>
</tr>
<tr>
<td>15</td>
<td><em>Market Media and Democracy</em></td>
<td>Buroshiva Dasgupta</td>
<td>Institute of Development Studies Kolkata</td>
<td>2011</td>
</tr>
</tbody>
</table>

17 Rabindranath: Bakpati Biswamana, Volume 2, Sudhir Chakravarti (editor), Rabindranath Tagore Centre for Human Development Studies, 2011.

18 Rabindranath: Bakpati Biswamana, Volume 1, Sudhir Chakravarti, Rabindranath Tagore Centre for Human Development Studies, 2011.

19 Eastern India in the Late Nineteenth Century, Part II: 1880s-1890s, Amiya Kumar Bagchi & Arun Bandopadhyay (editors), Manohar and Indian Council of Historical Research, New Delhi 2011.


21 The Politics of the (Im)Possible, Barnita Bagchi (editor), Sage, 2012.


26 An Introduction to the History of America, Jenia Mukherjee and C. Palit (editors), New Delhi: Cambridge University Press, 2014.


29 *Marxism: With and Beyond Marx*, Amiya Kumar Bagchi and Amita Chatterjee (editors), Routledge, 2014.


34 *Interrogating Disability in India: Theory and Practice in India*, Nandini Ghosh (editor), Springer India, 2016.


